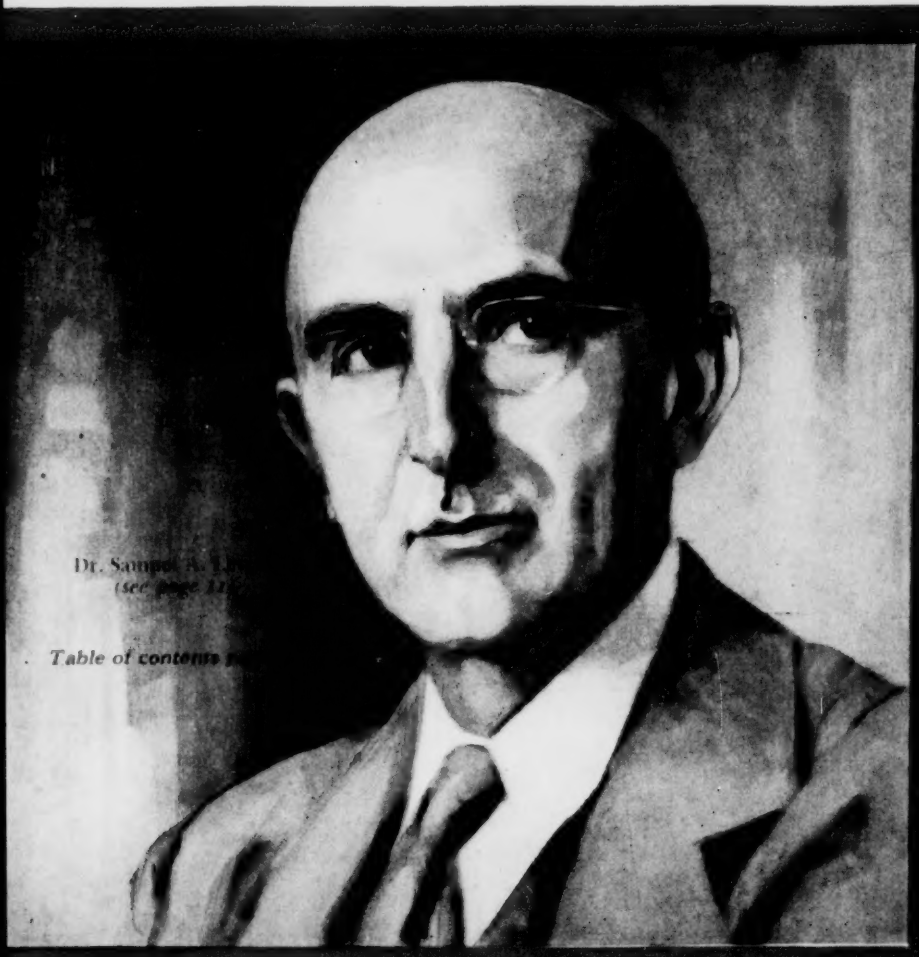
MODERN MEDICINE



Dr. Samuel A. L
(see page 11

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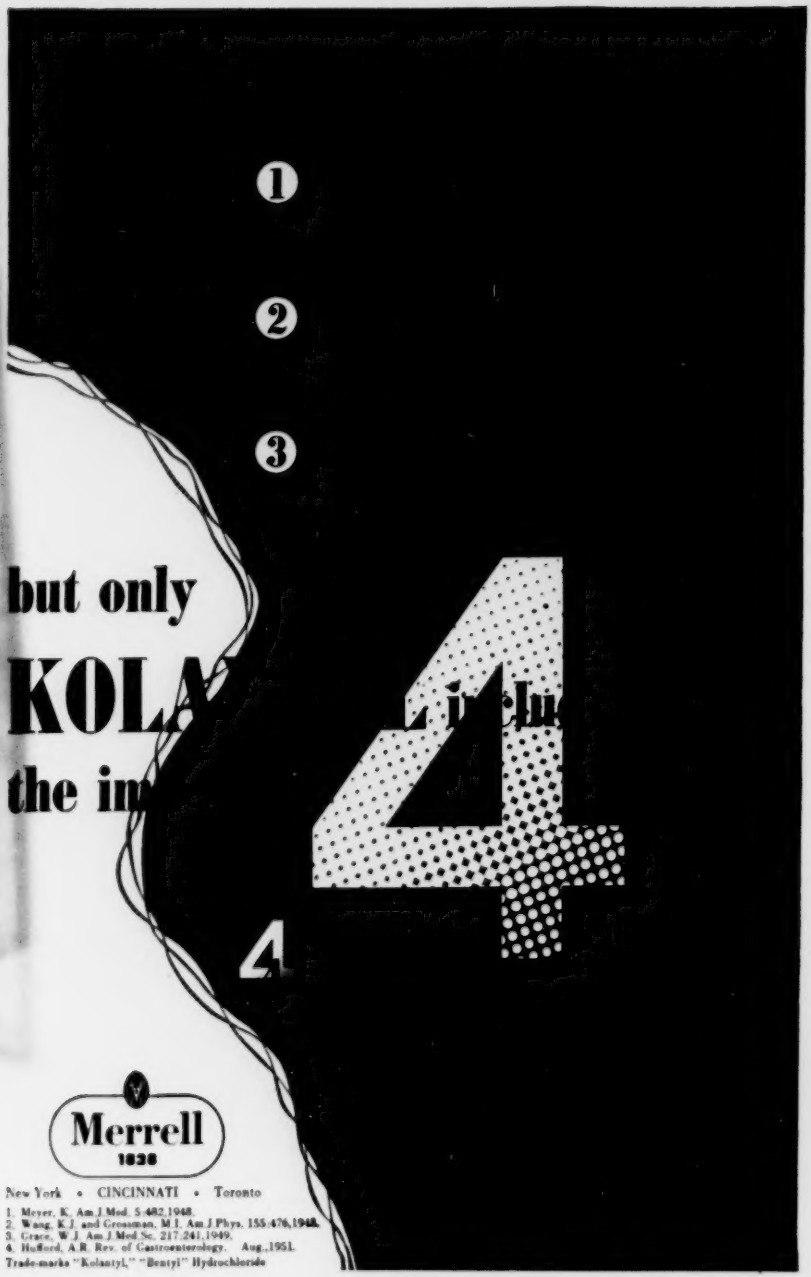

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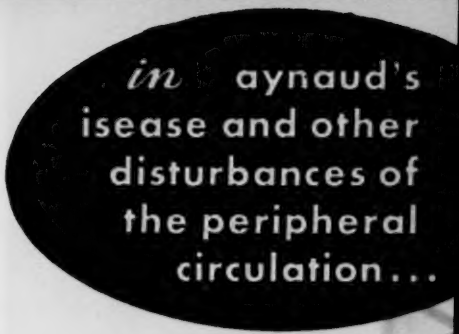
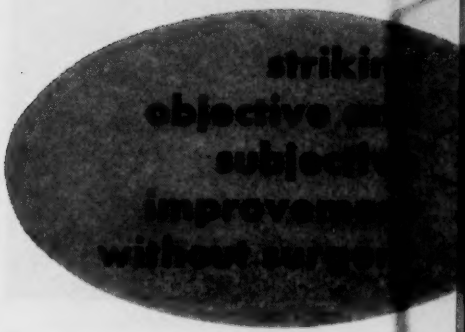
1. Meyer, K. Am.J.Med. 5:482,1948.
2. Wang, K.J. and Grossman, M.I. Am.J.Phys. 155:476,1948.
3. Grace, W.J. Am.J.Med.Sc. 217:241,1949.
4. Hufford, A.R. Rev. of Gastroenterology. Aug.,1951.





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1. Kleckner, M. S., Jr., et al.: Circulation 3: 681, 1951. 2. Idem: Proc. Staff Meet., Mayo Clin. 25: 657, 1950. 3. Fox, M. J.: Wisconsin M. J. 47: 833, 1948. 4. Lund, F.: Acta med. Scandinav. Supp. 206: 196, 1948.

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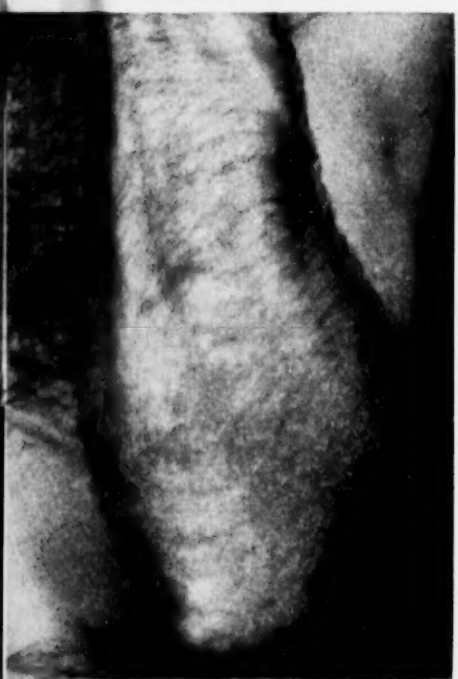
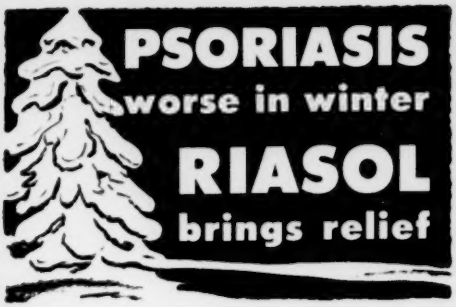


AFTER Use of RIASOL



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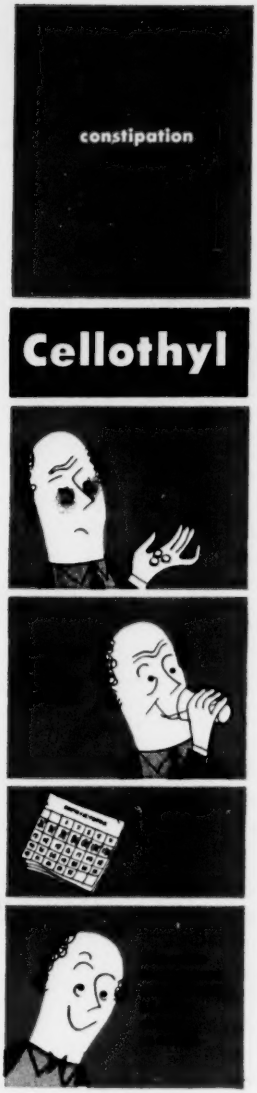

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Intestinal Stasis

The physician finds in treating intestinal stasis that the patient has usually "doctored" himself for years with cathartics or enemas; his bowel habits may be bad; he may feel convinced that not constipation but "something else" is wrong.

Despite these handicaps, the patient can be convinced that his condition is correctible. But first he must accept the idea that the goal of therapy is *correction*, not transitory relief or "quick cure".

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4 **dyschezia** . . . *by assuring soft, moist, easily passed stools.*

Normal, well-formed stools usually begin in 3 to 4 days. However, therapy must be continued until Cellothyl's peristalsis-stimulating bulk achieves intestinal regularity.

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MODERN MEDICINE

THE JOURNAL OF DIAGNOSIS AND TREATMENT

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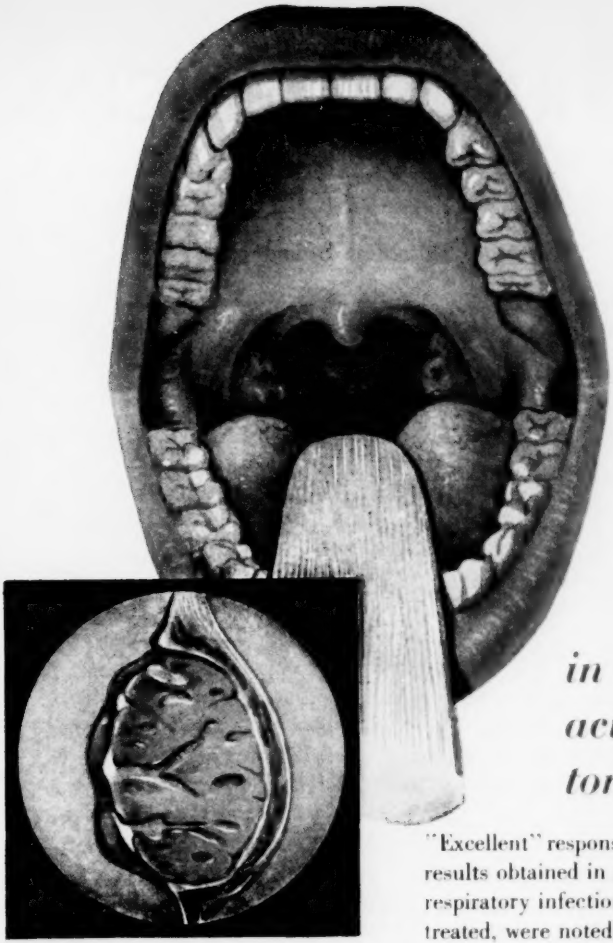

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Sayer, R. J.; Michel, J.; Moll, F. C., and Kirby, W. M. M.: Am. J. M. Sc. 221:256 (March) 1951

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MODERN MEDICINE

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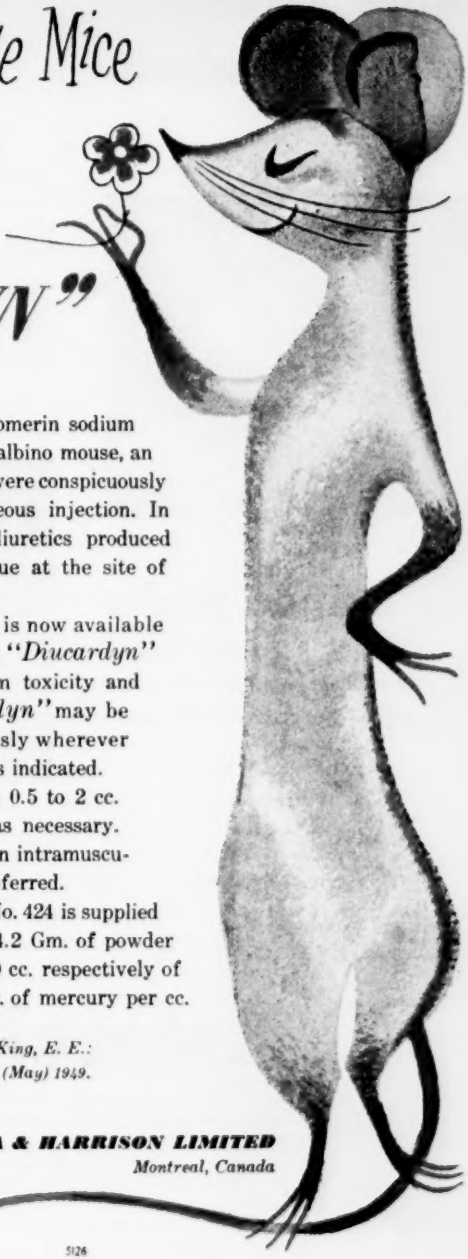
Even Sensitive Mice Tolerate "DIUCARDYN"



It speaks well for mercaptomerin sodium that toxic reactions in the albino mouse, an especially sensitive animal, were conspicuously absent following subcutaneous injection. In contrast, other mercurial diuretics produced marked destruction of tissue at the site of injection.*

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*Lehman, R. A., Taube, H., and King, E. E.: Proc. Soc. Exper. Biol. & Med. 71:1 (May) 1949.

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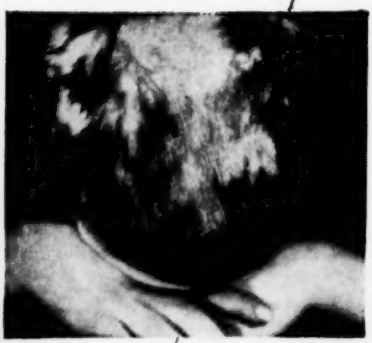

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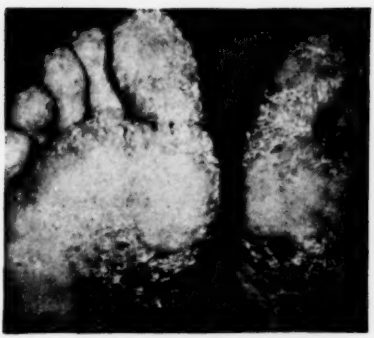
"More effective in ringworm of the scalp than any other topical agent."[1]

tinea pedis

In "athlete's foot" a combined cured and improved rate of 95% has been obtained.[1]



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1. Stritzler, C.; Fishman, I. M., and Laureca, S.: *Transactions New York Acad. Sc., 13*:31, Nov., 1950.

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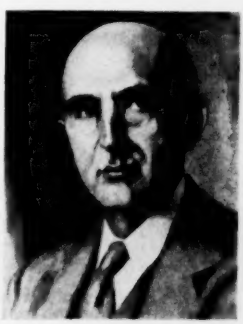
for
December 1
1951

Modern Medicine
Vol. 19, No. 23



THE MAN ON THE COVER is Dr. Samuel A. Levine of Boston, Clinical Professor of Medicine at the Harvard University Medical School and member of the staffs of Peter Bent Brigham Hospital, Boston, and Newton-Wellesley Hospital. Dr. Levine is a director of the Coronary Research Project, Massachusetts General Hospital, and a past president of the New England Heart Association. He is author of the books *Coronary Thrombosis* and *Clinical Heart Disease* and many other publications in the field of cardiology. The report, "The Myth of Bed Rest for Heart Disease," appearing on page 73, is based on an article by Dr. Levine originally published in the *American Heart Journal*.

Contents for December 1 1951

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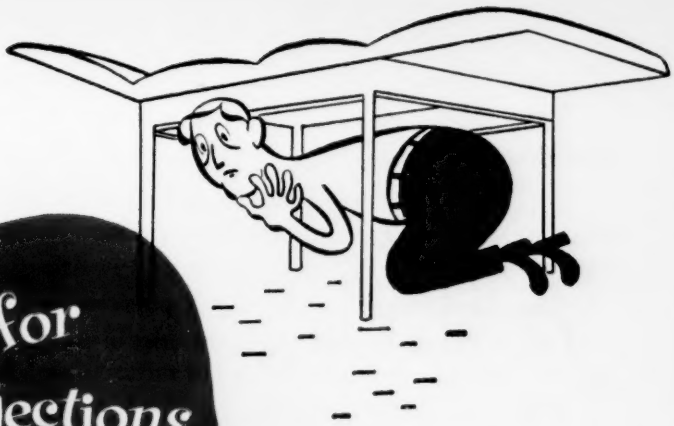

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LETTER FROM THE EDITOR

Dear Reader:

The greatest resource of any nation is the health of the people. That our country stands pre-eminent in that respect is due to four factors:

1] The character and training of our physicians,

2] The teaching and investigative activities of our great medical schools,

3] The research and productive capacities of private pharmaceutical industries, and

4] The swift and widespread dissemination of new medical knowledge through our medical journals.

Doctors, educators, manufacturers, and publishers, to the degree that they do the job marked out for them, are patriots of the first order. Their efficiency is not only a matter of self-interest, but of national concern. How well they have been doing their tasks is evident from comparison of health statistics of other nations.

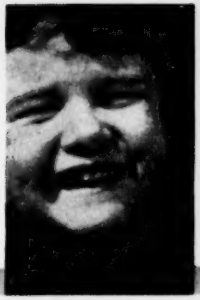
Take away from the effectiveness of any one of these agencies and the people of the nation suffer. Likewise, any improvement is reflected in a stronger, healthier people. Integration of the four contributes immeasurably to the happiness of the population and to the security of the nation.

As for my fellow editors and me, our interests and our duty are the same. It is summed up in the statement of *Modern Medicine* policy: To bring the significant developments in medicine to the doctors everywhere in America in the shortest possible time. We are proud of our past achievements, but we are neither complacent nor satisfied. We are ever striving to perfect better means of professional communication and to make *Modern Medicine* indispensable to every physician who wants to give his patients the best care possible in light of modern knowledge.

Walter C. Alvarez

EDITOR-IN-CHIEF

designed for the



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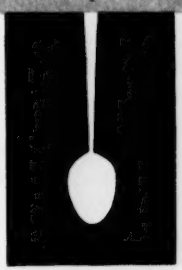

Correspondence

Communications from the readers of MODERN MEDICINE *are always welcome. Address communications to The Editors of* MODERN MEDICINE, *84 South 10th St., Minneapolis 3, Minn.*

Sequence of Symptoms

TO THE EDITORS: Re the clue, Diagnostix Case MM-198 (*Modern Medicine*, Sept. 1, 1951, p. 96):

Question: What was the onset?

Answer: Nausea, vomiting, fever 100°, and sudden onset of right lower quadrant abdominal pain within an hour.

I have done general practice for sixteen years. In making the diagnosis of acute appendicitis, I have made more mistakes with examination than I have with taking a careful history. I doubt very much a diagnosis of acute appendicitis when one finds nausea, vomiting, fever, and then pain.

H. H. FEISSNER, JR., M.D.

Freeland, Pa.

¶The implication of the sentence is that the symptoms all developed rapidly; within an hour the patient was nauseated, had vomited, and had fever and pain. In such a short time, the exact sequence of events could hardly be distinguished.—Ed.

Urticaria Treatment

TO THE EDITORS: In the October 1 issue of *Modern Medicine*, I was especially interested in the question by a Minnesota physician (p. 41) about a case of chronic urticaria. I believe the consultant answering the question failed to give due credit to the somewhat obvious cause of penicillin therapy just preceding the onset.

Involvement of the palms and soles is quite typical in my experience of this type of urticaria, although other causes may produce involvement here. I am quite aware of the long duration, but urticaria, including that caused by penicillin, can last a long time. We should remember the type of penicillin used in 1946, probably penicillin in beeswax and oil.

I used to have a lot of trouble with this type of urticaria, but since using cortisone, I have very little trouble. Three or four days of cortisone usually do the trick. ACTH, of course, is a good alternative. I believe little will be accomplished with diets, calcium injections, and so on for this difficult problem.

STANTON B. MAY, M.D.

Los Angeles

Clarification

TO THE EDITORS: Your publishing a report of my article on "Treatment of Fractures of Upper Extremity" in the September 15 issue of *Modern Medicine* (p. 109) pleased me very much. Many of the minor but important points cannot be stressed too often and your interesting journal gives very wide publicity.

I would appreciate your clarifica-

a practical

step forward

in the therapy of rheumatic affections

Pabalate usually provides better therapy for rheumatic affections than pure salicylate itself, through its mutually synergistic combination of para-aminobenzoic acid and salicylate.[1,2] Reports of authoritative clinical tests show a *higher* degree of pain relief... to *more* patients... on *lower* dosage... over *longer* periods... with *greater freedom* from adverse reactions.[3]

REFERENCES: 1. Dry, T. J. et al.: Proc. Staff Meetings Mayo Clin., 21:497, 1946. 2. Hoagland, R. J.: Am. J. Med., 9:272, 1950. 3. Smith, R. T.: J. Lancet, 70:192, 1950.

FORMULA: Each enteric-coated tablet or each teaspoonful of chocolate-flavored liquid contains 0.3 Gm. (5 gr.) sodium salicylate U.S.P., and 0.3 Gm. (5 gr.) para-aminobenzoic acid (as the sodium salt).

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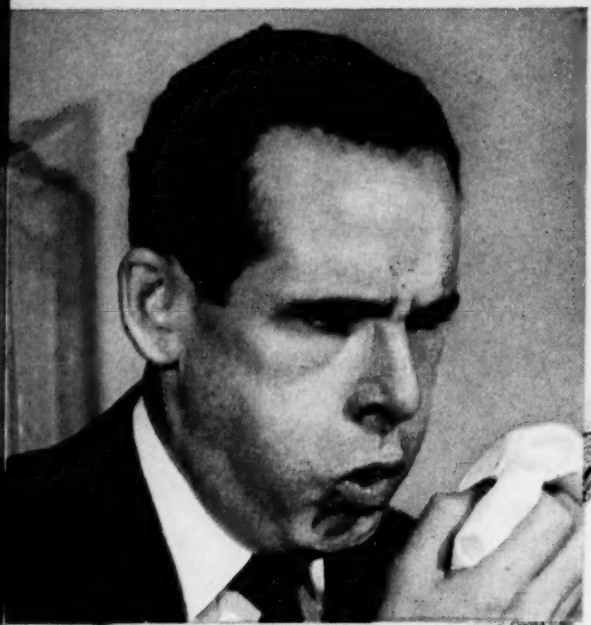

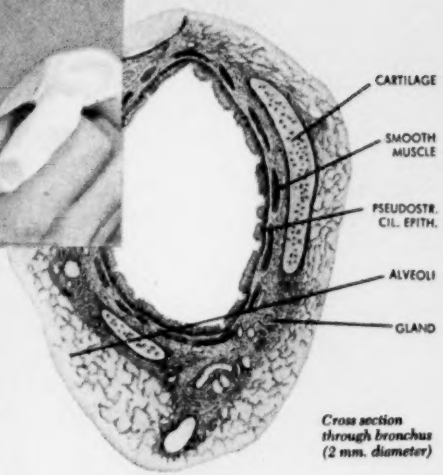

Cross section through bronchus (2 mm. diameter)

The time-encrusted *empirical* approach to cough therapy—with its "picture of confusion, contradiction and neglect"[3]—can now be replaced by sound, *rational* non-narcotic treatment, thanks to the pioneering studies of Boyd et al.,[1,2] demonstrating that glyceryl guaiacolate is the most powerful of expectorants commonly used. Robitussin—the antitussive-expectorant with specific drug action—provides glyceryl guaiacolate for increasing respiratory tract fluid, together with desoxyephedrine, for its bronchial-spasm-relieving[3] and its mood-improving actions—in an aromatic syrup that is highly patient-acceptable.

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1. Boyd, E. M. and Lapp, S.: J. Pharmacol. and Exper. Therap., 87:24, 1946. 2. Connell, W. F. et al.: Canad. M.A.J., 42:220, 1940. 3. Novelli, A. and Tainter, M. L.: J. Pharmacol., 77:324, 1943.

Formula:

Each 5 cc. (1 teaspoonful) contains 100 mg. glyceryl guaiacolate and 1 mg. desoxyephedrine hydrochloride, in a palatable aromatic syrup.

tion of an important point which I fear your résumé has misconstrued from its original intent. You state that "When marginal fractures extend into the interphalangeal joints, the fingers are *mobilized* in flexion at the metacarpophalangeal and interphalangeal joints." My original article stated that these marginal fractures "frequently result in slight lateral subluxation of the fractured phalanx. This occurs when the fragment is large, i.e., about one-third of the articular surface. Unless the displacement is corrected by traction or open operation the functional result is poor. Traction is best obtained by a needle or steel safety pin inserted through the distal phalanx and elastic traction obtained by means of a coat hanger or other wire incorporated in a forearm cast. The finger must always be *immobilized* in flexion at the metacarpophalangeal and interphalangeal joints."

In the treatment of Colles' fracture you state: "Complete splinting of three to four weeks is mandatory. Thereafter the cast is removed *weekly* for exercise and physiotherapy." This implies that these fractures should be immobilized for at least six weeks, probably longer. On the contrary I *never* immobilize longer than five weeks, usually only four weeks. My article states: "Three to four weeks is a minimum period for complete immobilization. Following this the splints should be reapplied after exercise and physiotherapy, for an additional week or two." If the wrist is immobilized in acute flexion it must be straightened out in three weeks even though a week or two of further immobilization may be indicated (by extreme comminution).

MILTON J. WILSON, M.D.

New York City

1. Rehfuss, M.E.; Albrecht, [illegible] Price, A.H.: A Course in [illegible] Therapeutics, Baltimore, The Williams & Wilkins Co., 1948, p. 660.

2. Driggs, R.D.: Selective Utilization of Barbiturates, J.A.M.A. 139:148-150 (Jan. 15) 1949.

3. Council on Pharmacy & Chemistry: New and Nonofficial Remedies, 1950, Philadelphia, J. B. Lippincott Co., 1950, p. 383.

X-Rays for Vesical Cancer

TO THE EDITORS: In reviewing the October 1, 1951 issue of *Modern Medicine*, I came across this statement in a Medical Forum letter (p. 143): "Roentgen therapy is not recommended for palliating incurable bladder cancers."

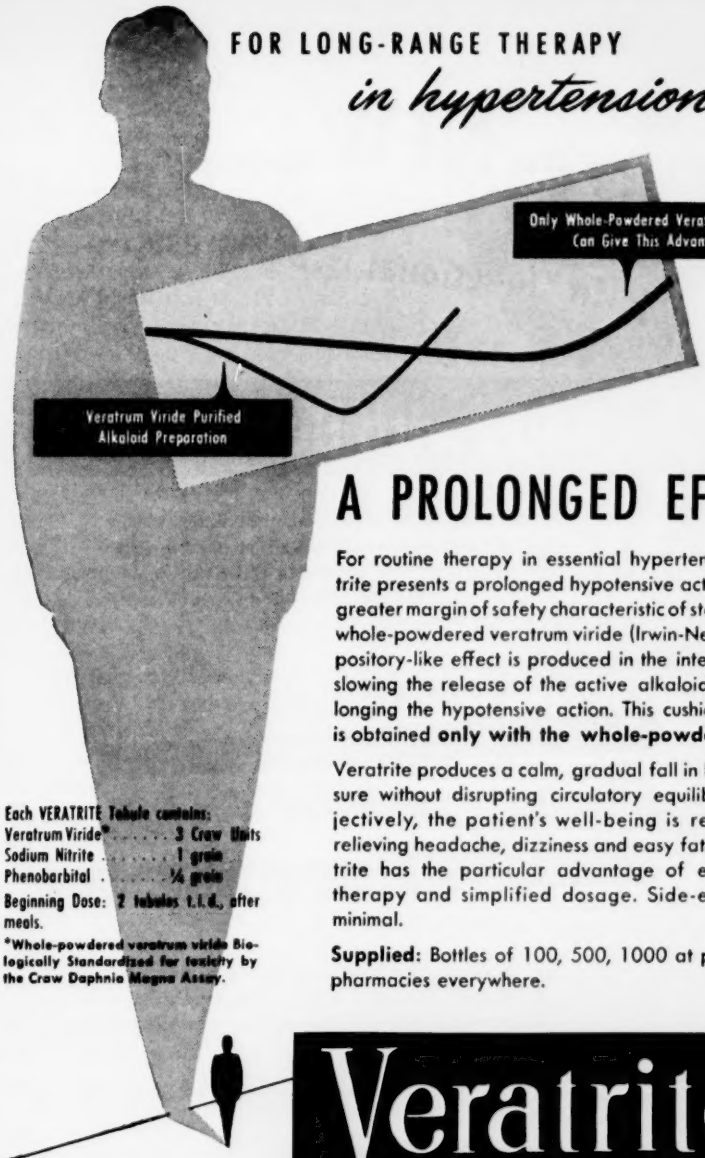
In view of the very discouraging alternative left for the sufferer if radiation therapy is not employed, it seems to me wise to review this statement, since it is one that I have heard on several occasions, voiced by urologists speaking from experiences with some of their own cases. Our experience, as well as that of many others, has shown that some vesical cancers can be controlled by radiation therapy, and that therefore this form of treatment *does* have a place in the management of this most disagreeable affection.

In former years, many patients were treated by such qualities of rays, in such doses, and with such technic as no longer are employed by modern radiotherapists. Tremendous advances have been made in technic and in knowledge of filtration, cross fire, tissue tolerance, and tissue dosage measurement. The experience accumulating with these improved conditions gives reasons for a more optimistic view of the value of radiotherapy in bladder cancer. Already statistical data are available on the results of the improved conditions and methods.

Buschke, Cantril, and Parker last year published the results of the treatment of 61 patients with cancer of the bladder by high-voltage roentgen rays, in which the therapy was concluded between 1934 and 1942. Of these, 9 were clinically and cystoscopically well to the date of the sur-

FOR LONG-RANGE THERAPY

in hypertension



A PROLONGED EFFECT

For routine therapy in essential hypertension, Veratrite presents a prolonged hypotensive action with the greater margin of safety characteristic of standardized whole-powdered veratrum viride (Irwin-Neisler). A repository-like effect is produced in the intestinal tract, slowing the release of the active alkaloids and prolonging the hypotensive action. This cushioned effect is obtained **only with the whole-powdered drug.**

Veratrite produces a calm, gradual fall in blood pressure without disrupting circulatory equilibrium. Subjectively, the patient's well-being is restored by relieving headache, dizziness and easy fatigue. Veratrite has the particular advantage of economy of therapy and simplified dosage. Side-effects are minimal.

Supplied: Bottles of 100, 500, 1000 at prescription pharmacies everywhere.

Each VERATRITE Tabule contains:
Veratrum Viride* . . . . . 3 Craw Units
Sodium Nitrite . . . . . 1 grain
Phenobarbital . . . . . ¼ grain
Beginning Dose: 2 tabules t.i.d., after meals.

***Whole-powdered veratrum viride Biologically Standardized for toxicity by the Craw Daphnia Magna Assay.**

Veratrite

in Mild and Moderate (Grades I and II) Hypertension

IRWIN, NEISLER & COMPANY • DECATUR, ILLINOIS

Research to Serve Your Practice

the NEW therapy

in "functional G.I. distress"...

Decholin with Belladonna

Patients complaining of gastrointestinal distress without detectable organic cause are common problems in daily practice. By combining spasmolytic action with improvement in liver function, *Decholin/Belladonna* – in such cases – gives symptomatic relief by

reliable spasmolysis

hydrocholeretic flushing of biliary tract

improved blood supply to liver

mild, natural laxation without catharsis

While of special value in functional dyspepsia, *Decholin/Belladonna* is, of course, treatment of choice in biliary tract disorders for thorough and unimpeded flushing of the biliary system.

DOSAGE: One or, if necessary, two *Decholin/Belladonna* tablets three times daily after meals.

PACKAGING: *Decholin* (brand of dehydrocholic acid) *with Belladonna*, bottles of 100 tablets. Each tablet contains dehydrocholic acid 3¾ gr. and belladonna ⅛ gr. (equivalent to tincture of belladonna, 7 minims).

Decholin, trademark reg.

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DB-1

vey, 1 for ten years, 2 for seven years, 1 for six years, 3 for five years, and 2 for four years; 9 were well for more than four years, and 6 of these for more than five years.

The biologic type of the tumor is the most important single factor for success or failure, according to these authors, hence the necessity for careful selection of cases. Primarily infiltrating ulcerative carcinoma will tend to give poor results. The most satisfactory group for radiation treatment falls in the class of papillary carcinomas of low or moderate degree of differentiation which have not invaded vesical wall muscle.

Treatment with radium "cannons" (5 to 10 gm.) furnishes rays comparable to those from a supervoltage instrument of 1 or 2 million volts and should give similar results. In the near future it will be possible to install radioactivated cobalt of even greater intensity. Taking into account the lessons learned from the published experience of Buschke, Cantril, and Parker and the other numerous publications now appearing, future results with radiotherapy of cancer of the bladder should continue to offer hope of important alleviation of symptoms and perhaps an increasing number of five-year arrests.

To tolerate the type of radiation procedure contemplated with the newer conditions and equipment, patients will have to be in fairly good general condition. There must be careful correlation of urologic and radiologic efforts. Many patients need both radiation and surgery, though it appears that a cystotomy may complicate the administration of adequate dosages of radiation.

JAMES T. CASE, M.D.

Santa Barbara

Sages on Athletes

TO THE EDITORS: For hundreds of years, Hippocrates and Galen were the guiding lights of medicine all over the world. Modern physicians never even consider the sages' advice concerning current events. While our country is being shocked by athletic scandals, none of our medical publications has mentioned the opinions of Hippocrates and Galen:

The extreme development which athletes acquire is deceiving.

—HIPPOCRATES

There are in nature goods of the mind and goods of the body. Athletes enjoy none of the former, since they are too ignorant to appreciate even that they have a mind. In the amassing of their great quantity of flesh and blood, their mind is lost in the vast mire. Receiving no stimulus to develop, it remains as stupid as that of brutes.

—GALEN

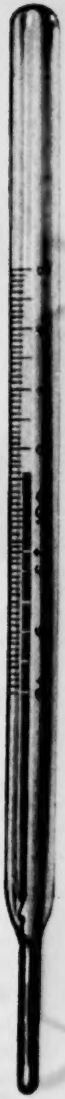
If the modern medical hierarchy disagrees, it should have the courage to contradict the old sages instead of silencing them. Galen had the decency to quote Euripides (480-406 B.C.): "A thousand evils afflict Greece, and not one greater than athletics!"

ALFRED ROSSKAMM ROSS, M.D.
Andover, N.Y.

"I've read all the books on diet and taken the pills. Now what do you recommend?"

Reduce the fever...

Relieve the discomfort...



of the common cold

As always, you can *depend* upon Anacin to relieve the discomforts of the common cold. These tablets provide all the advantages of the time tried and proven APC formula —*fast prolonged analgesia* with no unpleasant side effects, such as drowsiness. Anacin helps reduce the fever and affords a mild degree of sedation to make the patient feel comfortable again. Anacin is available at all pharmacies for your patients' convenience. Samples will be sent to you upon request.

ANACIN®

WHITEHALL PHARMACAL COMPANY • 22 East 40th Street, New York 16, N. Y.

Working on Thromboplastin

TO THE EDITORS: There are very good reasons for employing a relatively weak thromboplastin, as prepared originally by Quick, in preference to the potent thromboplastin which he later introduced.

This is extremely important clinically; for instance, preoperatively in certain jaundiced patients, a reduction to perhaps 70% of normal might pass unnoticed if the more potent thromboplastin were used, as it would be indicated by a prolongation of only 2 seconds in the prothrombin time over that of a normal control. If operation were carried out in such patients at this stage without vitamin K therapy, a further small drop in blood prothrombin as a result of operative procedures might well bring it to the hemorrhagic level with serious and possibly fatal consequences.

Therefore, we are presently working to develop and produce two types of stable and standard thromboplastin; one type will have a clotting time between 10 and 14 seconds (our average thus far has been 11.2 seconds), and a second type will clot between 18 and 22 seconds. When these two products are placed on the market they will be ready for immediate use on the addition of distilled water alone, thus permitting performance of the test by the physician in his office, and allowing it to be done with much greater ease anywhere.

I hope this bit of news will sound good to Drs. Belton G. Griffin and Esther S. Nelson as well as many other physicians (*Modern Medicine*, Sept. 15, 1951, p. 28).

ARNOLD A. SWANSON
Schulenburg, Tex.

Therapeutic dosage of vitamins including vitamin B_{12} plus minerals and trace elements

For more prompt and effective correction of frank nutritional deficiency states

NEW—HIGH POTENCY FORMULA offers more rapid, more dependable therapeutic response in frank nutritional deficiencies.

"Therapeutic levels of vitamin supplementation are indicated in the presence of evidence of one or more specific deficiency diseases. Since it is well established that deficiencies of a single essential nutrient rarely occurs in human medicine, therapy should include **SUPPLEMENTATION WITH 5 TO 10 TIMES THE NATIONAL RESEARCH COUNCIL RECOMMENDATIONS OF THE SPECIFIC NUTRIENT INVOLVED WITH 1 TO 5 INCREMENTS OF THE REMAINING.**"

Mann, G. V. and Stare, O. V. Nutritional Needs in Illness and Disease, J.A.M.A. (Feb. 11, 1950) P. 412.

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each VI TERRA THERAPEUTIC capsule contains:

VITAMIN A	25,000 U.S.P. Units
VITAMIN D	1,000 U.S.P. Units
VITAMIN B_1	10 mg.
VITAMIN B_2	5 mg.
VITAMIN B_{12}	5 mcg.
NIACINAMIDE	100 mg.
VITAMIN C	150 mg.
CALCIUM	103.0 mg.
COBALT	0.1 mg.
COPPER	1.0 mg.
IODINE	0.15 mg.
IRON	10.0 mg.
MAGNESIUM	6.0 mg.
MANGANESE	1.0 mg.
MOLYBDENUM	0.2 mg.
PHOSPHORUS	80.0 mg.
POTASSIUM	5.0 mg.
ZINC	1.2 mg.

Vi terra THERAPEUTIC

Vi terra Therapeutic
is available in bottles of 100 capsules
at all pharmacies

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In Coronary Atherosclerosis... Morbidity and Mortality can be reduced with

SOLUTION SIRNOSITOL

CHOLINE AND INOSITOL

In a report of a three year study of 115 cases of coronary atherosclerosis, a marked reduction in mortality was noted after prolonged lipotropic therapy as compared to the mortality among an equal number of untreated controls.[1] The efficacy of lipotropic agents in the treatment of coronary atheromatosis may be due to their ability to reduce the serum levels of cholesterol and other lipids which are considered to be of etiologic importance in atherosclerosis. [1, 2, 3]

A Synergistic Combination—Both choline and inositol, as provided by Solution Sirnositol, are synthesized into the phospholipid complex—choline into lecithin and inositol into other liver phospholipids. The role of choline and inositol in the maintenance of phospholipid levels has a stabilizing and dispersing effect on the esterified cholesterol fraction in plasma.[3] A natural synergism enhances the lipotropic effect of choline and inositol administered in combination, thereby also enhancing the therapeutic results.[4]

High Dosage—Satisfactory therapeutic response occurs only with an adequately high dosage of choline and inositol. Solution Sirnositol provides an aqueous, sugar-free, highly palatable and potent means of lipotropic therapy. The daily dose of three tablespoonfuls provides:

Choline gluconate	22.23 Gm.
Inositol	2.25 Gm.

Available in 16 oz. bottles, on prescription only.

REFERENCES

1. Morrison, L. M., and Gonzales, W. F.: Results of Treatment of Coronary Arteriosclerosis with Choline, Am. Heart J. *39*:729 (May) 1950.

2. Morrison, L. M., and Wolfson, E.: The Effect of Lipotropic Agents (Choline, Inositol) and Estrogenic Hormones on Serum Lipid Fractions, Circulation *2*:479 (Sept.) 1950.

3. Leinwand, I., and Moore, D. H.: Simultaneous Studies on the Serum Lipids and the Electrophoretic Pattern of the Serum Protein in Man: (1) Action of Inositol and Other Substances, Am. Heart J. *38*:467 (Sept.) 1949.

4. Best, C. H.; Lucas, C. C.; Patterson, J. M., and Ridout, J. H.: Lipotropic Properties of Inositol, Science *103*:12 (Jan. 14) 1946.

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highly concentrated, purified water-soluble chlorophyll promotes healing of affected areas, duplicating the outstanding results obtained in treatment of external lesions.

specially prepared, mucilaginous okra base clings tenaciously to mucosal walls, protecting against erosion and maintaining the chlorophyll in prolonged contact with the lesion.

prompt, sustained antacid action — without undesirable side effects — provided by magnesium trisilicate and aluminum hydroxide.

packaging: CHLORESIUM MUCINOID is available in bottles of 50 and 200 tablets and in boxes of 25 powders.*

*CHLORESIUM POWDER will continue to be available in boxes of 25 envelopes but will now be sold under the name CHLORESIUM MUCINOID.

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Questions & Answers

All questions received will be answered by letter directed to the petitioner; questions chosen for publication will appear with the physician's name deleted. Address all inquiries to the Editorial Department, MODERN MEDICINE, *84 South Tenth Street, Minneapolis 3, Minnesota.*

QUESTION: What therapy is advised for an 8-year-old girl with hypertrophy of the left breast? The enlargement is smooth, even, circular, and not painful. The right breast shows no enlargement.

M.D., Ill.

ANSWER: *By Consultant in Gynecology.* Localized hypertrophy of the breast in an 8-year-old girl is probably developmental in origin. No therapy is indicated unless the local growth shows evidence of being neoplastic in origin or is of concern for cosmetic reasons. In either case, therapy would be surgical.

QUESTION: Are children born of close relatives apt to have hereditary or formative defects? Can I recommend for adoption a baby born to a 14-year-old girl and her 17-year-old brother?

M.D., California

ANSWER: *By Consultant in Human Genetics.* The physical and mental characteristics of man are largely determined by genes, of which each person has perhaps 5,000 or more pairs. Some are harmful, but some can be covered up by a normal gene. No harm is caused by one dose of a harmful recessive gene but, if present in two doses, an undesirable trait can arise.

Relatives have the same genes and, hence, each parent in a cousin marriage may pass on the same harmful gene to a child. First cousins tend to have $\frac{1}{8}$ or more genes in common; first cousins once removed, $\frac{1}{16}$; second cousins, $\frac{1}{32}$; and so on. Thus, if a man were known to be carrying the gene for albinism, chances that his cousin had it would be 1 in 8. If they both had it, chances would be 1 in 4 that both would pass the same gene on to a child; multiplying the $\frac{1}{8}$ by $\frac{1}{4}$ gives a risk figure of $\frac{1}{32}$. Thus, the objection to cousin marriages does not seem great beyond first cousins.

In the case in question, the blood relationship is much greater than that between cousins, and the parents probably have at least one-half of their genes in common. Consequently, were we to predict the medical condition of a child of such parentage, we would have to increase the probability of an unfavorable outcome to at least 1 in 10 and perhaps higher if there are relatives with recessive hereditary disease.

If the child is born with no obvious abnormalities, the outlook, of course, is much brighter. Such traits as intelligence must be considered which cannot be evaluated immediately. Therefore, placement of the child should probably be postponed

the Stuart formula

Constant improvements have kept the Stuart Formula one of the finest multi-vitamins available

now contains B_{12} and trace minerals

TWO TABLETS (average daily dose) standardized to contain:

VITAMINS

A	5,000 USP units
D	800 USP units
C	100 mg.
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COMPLETE B COMPLEX

B_1	5 mg.
B_2	5 mg.
Niacin and Niacin Amide	30 mg.
B_6	0.2 mg.
B_{12} (50% USP Crystalline / 50% B_{12} Concentrate)	1 mcg.
Panthenol	4.3 mg.

Also other members of the B Complex from natural sources, yeast and liver fraction 2

MAINTENANCE MINERALS

Iron	15 mg.
Iodine	0.15 mg.

TRACE MINERALS

Boron	0.2 mg.
Cobalt	0.2 mg.
Copper	0.75 mg.
Manganese	1 mg.
Zinc	0.3 mg.

AVAILABLE AT ALL PHARMACIES

STILL THE SAME LOW COST

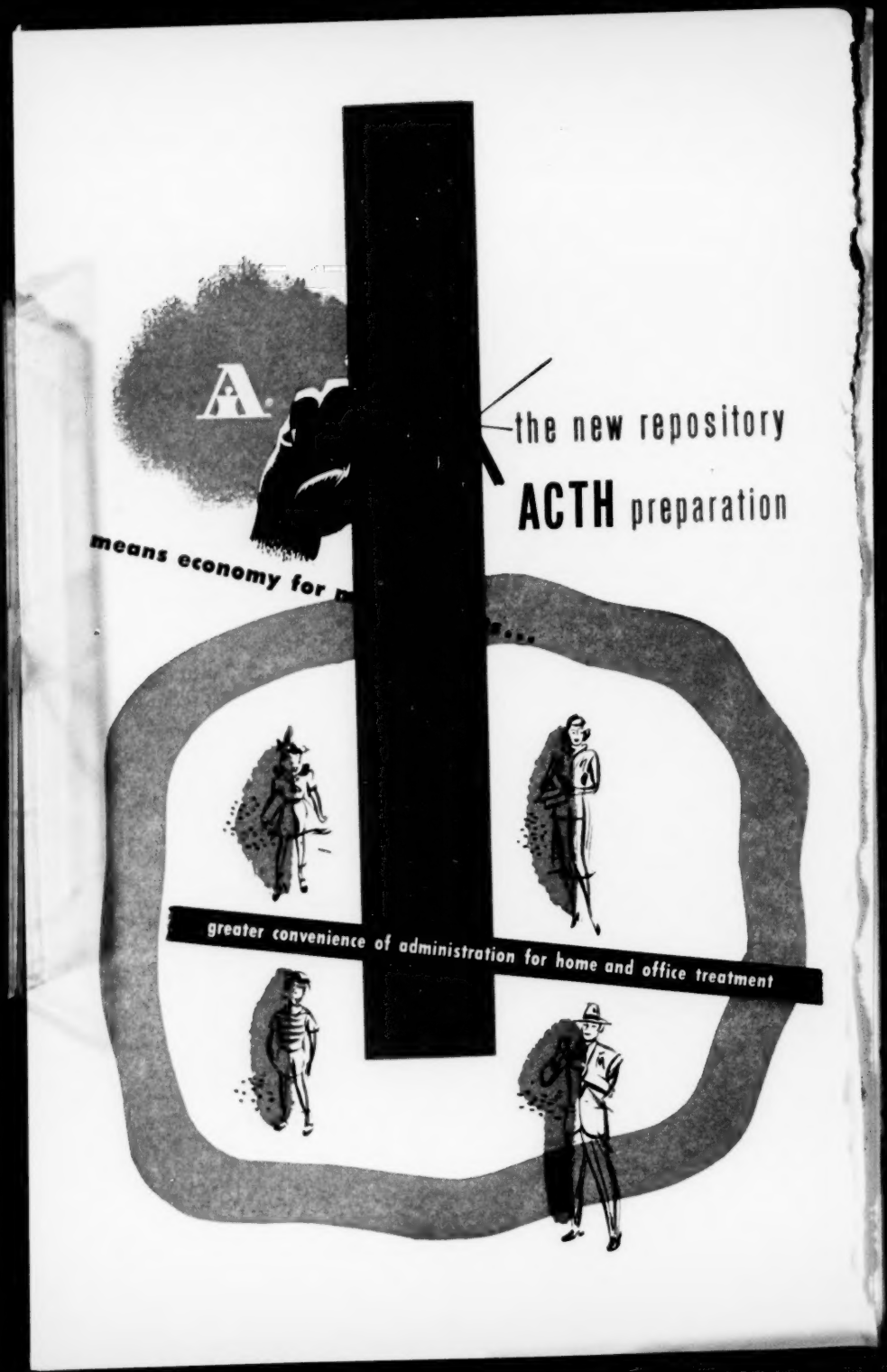
until about the age of 2, by which time evidence of any hereditary defects will have become apparent. Of course, if the parents are mentally defective, one cannot hope for a normal child, since unrelated defectives generally have undesirable offspring. Data do not exist relating to the incidence of abnormalities among children of brother-sister matings. Ordinarily, only abnormal cases come to the attention of the clinician and this probably accounts for the fact that the few offspring I have seen have usually been either mentally or physically defective.

QUESTION: Does soluble A and B substance make possible the use of type 0 blood for anybody? If so, what is it and how does it work?

M.D., Arizona

ANSWER: *By Consultant in Anesthesiology.* Group 0 blood has no A or B substance in its red cells and, therefore, the anti-A or anti-B factor in the recipient's serum does not agglutinate or destroy the cells in the group 0 donor blood. Group 0 blood, however, does have anti-A and anti-B factors in its serum which attack the recipient's red cells. The donor blood is ordinarily so diluted by the recipient's blood that little harm is done unless the group 0 donor blood has a very high titer of anti-A and anti-B. Customarily, this titer is estimated and only low titer group 0 blood is used for an A, B, or AB patient, if a universal donor is necessary.

If soluble A and B substances are added to group 0 blood, they combine with the anti-A and anti-B factors so that these factors are not available to attack the recipient's cells.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the new repository
ACTH preparation
means economy for
greater convenience of administration for home and office treatment

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ACTHAR *Gel*—a new repository ACTH preparation—is an important contribution to home and office treatment. A single injection in many cases provides an adequate daily dosage. Thus simplified administration plus a considerable price reduction of ACTHAR, which is fully reflected in the price of ACTHAR *Gel*, provides further economy of ACTH therapy.

ACTHAR *Gel* possesses all the efficacy of ACTHAR in aqueous solution and is well tolerated locally, whether administered intramuscularly or by deep subcutaneous injection.

Indications: Rheumatoid arthritis, rheumatic fever, acute lupus erythematosus, drug sensitivities, severe bronchial asthma, contact dermatitis, most acute inflammatory diseases of the eye, acute pemphigus, exfoliative dermatitis, ulcerative colitis, acute gouty arthritis, secondary adrenal cortical hypofunction.

Supplied: In 20 I.U. (mg.) and 40 I.U. (mg.) per cc. in 5 cc. vials.

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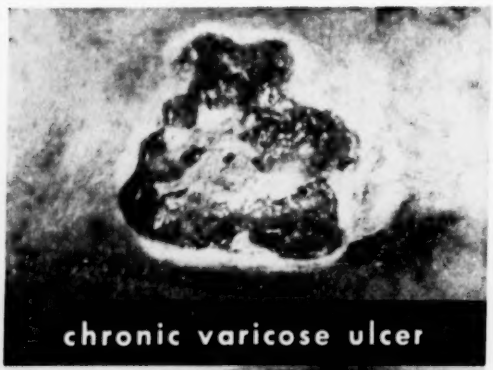
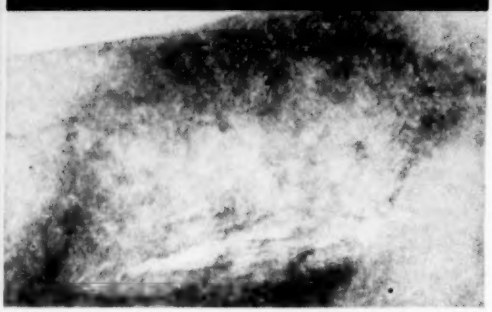
PHYSIOLOGIC THERAPEUTICS THROUGH BIORESEARCH

An Aid to Granulation and Rapid Epithelial Repair

September 6, 1950



chronic varicose ulcer



October 11, 1950

(unretouched photographs—showing results of treatment with White's Vitamin A and D Ointment)

- heals
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in

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bedsores . . .
burns, sunburn . . .
diaper rash . . .
intertrigo . . .
winter "eczema" . . .
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ATHEROSCLEROSIS ?

Too Much Cholesterol or Too Little Phospholipids

INCREASE PHOSPHOLIPIDS

The new isotope technique[3] has demonstrated that:

(a) choline deficiency occurs in man;

(b) phospholipid production is increased in deficiency states by choline;

(c) individuals differ in choline needs;

(Inositol also enters into synthesis of certain phospholipids.[4])

DECREASE CHOLESTEROL

Although cholesterol plasma levels may not be affected by dietary restrictions, the physical state of the cholesterol may be affected. Thus, "giant cholesterol molecules" associated with atherosclerosis may be eliminated by dietary control.[5]

RATIONAL MEASURES

In the light of these recent studies, *adequate* lipotropic therapy and cholesterol-restricted diets are rational measures in:

ATHEROSCLEROSIS
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And Other Unbalanced Conditions of Disturbed Cholesterol Metabolism

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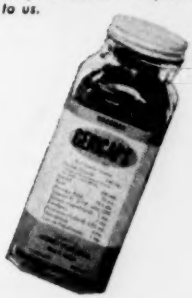
Supply Therapeutic Dosage of Lipotropics (700 mg.) with Vitamin A and B Complex factors to help compensate for deficiencies of low-cholesterol diets with Rutin and Vitamin C to prevent the retinopathy often associated with above diseases.

For Literature and Clinical Trial Package please write "Gericaps Literature" on post card, sign and send to us.



BIBLIOGRAPHY

[1]Morrison L.M.: Tests for Atherosclerosis. Proc. AM. Soc. for Study of Atherosclerosis P 478 (1950)

[2]Gertler, M.M.; Stanley M.; Blund, E.F.; Age, Serum, Cholesterol and Coronary Artery Disease. Circulation 2:517 (1950)

[3]Science 109:613 (June 17) 1949

[4]Biochem. J. 40:494 (1946)

[5]Gofman, J.W.; et al.; Science. 111:166 (1950)

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NOW...*effective, comfortable, sustained relief* from pain, cramps, general discomfort due to functional gastrointestinal spasm. In clinical studies,[1, 2, 3] BENTYL gave gratifying to complete relief in 308 of 338 cases, yet was "... virtually free from undesirable side effects."[3]

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Each capsule or teaspoonful syrup contains:

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with **PHENOBARBITAL** . . . . **15 mg.**
When synergistic sedation is desired

DOSAGE

ADULTS: 2 capsules or 2 teaspoonfuls syrup 3 times daily, before or after meals. If necessary, repeat dose at bedtime.

IN INFANT COLIC: ½ to 1 teaspoonful syrup 3 times daily before feeding.[4]

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1. Hock, C. W.: J. Med. Assn. Ga. 40:22, 1951. 2. Hufford, A. R.: J. Mich. St. Med. Soc. 49:1308, 1950.
3. Chamberlin, D. T.: Gastroenterology 17:224, 1951. 4. Pakula, S. F.: To be published.

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1. Kaliski, S. R., and Mitchell, D. D.: Treatment of Diarrhea with Carob Flour, Texas State J. Med. *46*:675 (Sept.) 1950.
2. Smith, A. E., and Fischer, C. C.: The Use of Carob Flour in the Treatment of Diarrhea in Infants and Children, J. Ped. *35*:422 (Oct.) 1949.

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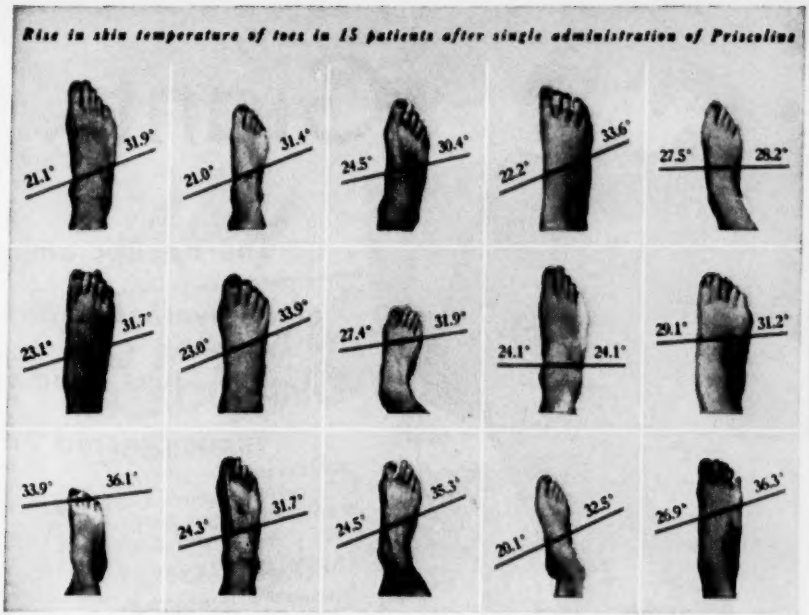

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The rise in skin temperature of the toes—indicating increased circulation in the extremities—was greatest in all cases after the administration of Priscoline.

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Priscoline® (benzazoline) is available as tablets containing 25 mg., as elixir containing 25 mg. per 4 cc. and in 10 cc. multiple dose vials containing 25 mg. per cc. p/1650m

1. Ready, W. J.: J. of Lab. & Clin. Med. 37:365 (March) 1951.

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Therapeutic amounts of six synthetic vitamins plus vitamin B_{12} compressed into a **tiny** *tablet*

BECAUSE there is no fish oil present in OPTILETS, there is no possibility of allergic reaction in persons sensitive to fish oils, no fishy burp, no fishy taste or aftertaste. Because they are tablets—not capsules—they can't leak, won't stick together in the bottle. Small, bright orange in color, OPTILETS are as palatable as they are potent—and cost no more than ordinary therapeutic formula vitamins. Bottles of 50, 100 and 1000. Abbott

Each small, sugar-coated OPTILET contains:

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ASCORBIC ACID	150 mg.

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These unposed photographs of patient T. H. were snapped during an actual interview with his physician. He is describing his symptoms of mental and emotional distress. See the opposite page for the case history of this patient.

NEWS ABOUT A BAUER & BLACK PRODUCT

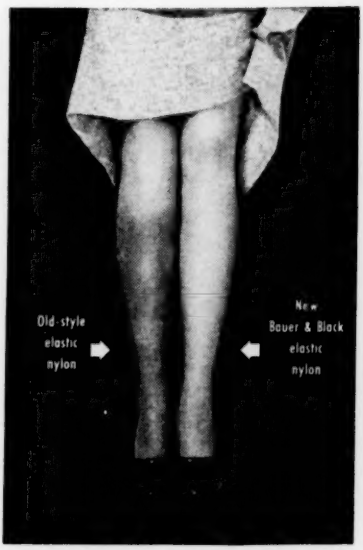
Now a nylon elastic stocking you can prescribe with confidence

Women have long been waiting for a nylon elastic stocking that won't discolor—now* Bauer & Black *introduces it!

It has long been known that an elastic stocking of nylon would reduce your patients' resistance to wearing these aids. But until now, no way had been found to produce such a stocking that wouldn't discolor.

Now, that way has been found. The new Bauer & Black nylon elastic stockings do not discolor. They are cooler to wear, fit more smoothly, and are far less conspicuous. They are easier to wash, wear longer and have the open toe that prevents foot cramp.

This new development adds one more reason why more women wear and more doctors prescribe Bauer & Black than any other elastic stocking.



On the left leg is an ordinary nylon elastic stocking, showing discoloration that comes with use. On the right is the new Bauer & Black Nylon Elastic Stocking, which keeps its original color for the life of the stocking.

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Other famous Bauer & Black Elastic Supports: TENSOR Elastic Bandage, BRACER* Supporter Belt, Abdominal Belts, Suspensories, Anklets, Knee Caps, Athletic Supporters.*

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NOTE: *The new nylon stocking does not replace our famous cotton elastic stocking, which will continue to be available.*

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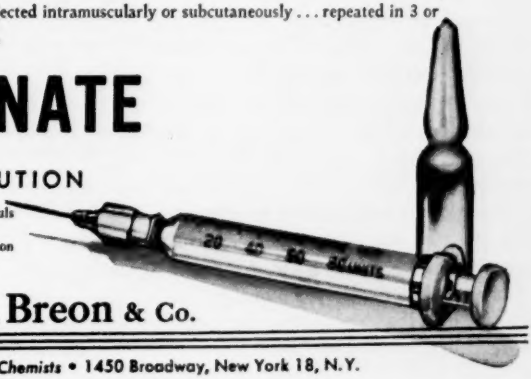

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Forensic Medicine

ARTHUR L. H. STREET, LL.B.

Prepared especially for Modern Medicine

PROBLEM: Was suspension of a physician's license for six months unduly severe for a second offense in advertising for patronage by means of letters, contrary to statute?

COURT'S ANSWER: No.

The Appellate Division of the New York Supreme Court, Third Department, so decided (105 N.Y. Supp. 2d, 549).

PROBLEM: Even if the jury in a malpractice suit was warranted in finding from the evidence that a urologist negligently permitted a drain tube to remain in plaintiff's scrotum after removing varicose veins from a testicle, could the jury find that ensuing atrophy of the testicle was caused by such negligence and not by thrombosis and necrosis, without supporting expert testimony?

COURT'S ANSWER: No.

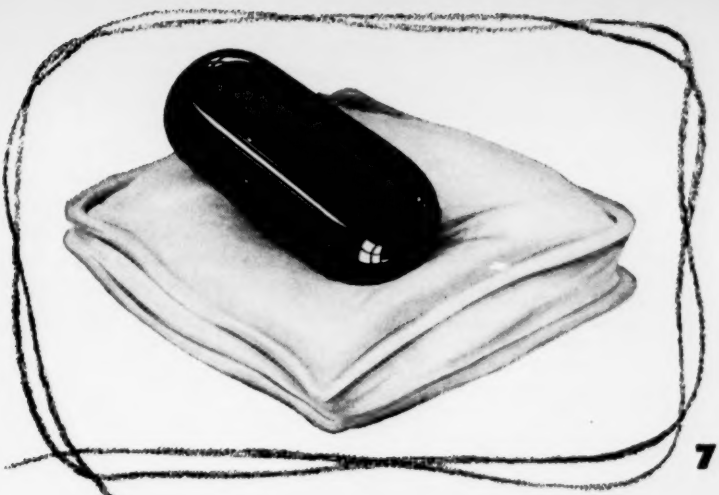
The decision was reached by the California District Court of Appeal, Second District, by a 2-to-1 vote. The majority opinion said that the patient's attorney erroneously assumed that the pathology following the alleged negligence was necessarily a consequence of it. The result can be charged to established negligence, without expert testimony, only "where a layman is able to say as a matter of common knowledge and observation that the consequences of professional treatment were not such as would have followed if due care had been exercised."

The court notes that it has taken centuries of medical and surgical study and experimentation to determine the causes of atrophy, degeneration, and disease of human mechanism. So, it takes expert testimony to establish whether thrombosis, necrosis, or a diseased or atrophied nerve, vein, or organ was caused by established negligence (231 Pac. 2d 108).

PROBLEM: The Memphis zoning ordinance permitted "the office of a physician, surgeon" to be maintained in his home in an "A" residence district; a "medical clinic" could be maintained in a "B" residence district, but not in an "A" district. Dr. B owned and lived in a large home in an "A" district, using nine rooms for living purposes and two small rooms and a reception room as an auxiliary office to receive patients from 4 P.M. to 8 P.M. His other office was uptown, where he received patients from 8 A.M. until 4 P.M. He practiced alone, with the assistance of a secretary and receptionist. Could his neighbors enjoin maintenance of the home office?

COURT'S ANSWER: No.

The Tennessee Supreme Court ruled out a contention that Dr. B was operating a "medical clinic" in his home, citing a medical dictionary's definition of that term as mean-



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3¾ gr.

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BIBLIOGRAPHY
1. Hyman, H. T.: An Integrated Practice of Medicine (1938)
2. Robison, G. B., et al: A Course in Practical Therapeutics (1942)
3. Goodman, L., and Gilman, A.: The Pharmacological Basis of Therapeutics (1941), 22nd printing, 1951.
4. Sollmann, T.: A Manual of Pharmacology, 7th ed. (1948), and Useful Drugs, 14th ed. (1947)

ing "an establishment where patients are admitted for special study and treatment by *a group of physicians practicing medicine together.*"

The court said that the doctor's quarters in connection with his home, the equipment used, and the operating methods were in line with the facilities usually found in a doctor's office. Nor did it make any difference how many patients came daily to Dr. B's home office (241 S. W. 2d 921).

PROBLEM: At the foot of outdoor steps leading to a doctor's office, a patient fell and was injured, allegedly because of a defect in a steel mat used as a mud scraper. She made no claim against the doctor until nearly five years later when she sued for damages. Her testimony at the trial showed that, through frequent visits to the office, she knew the condition of the mat, and there was no proof that the doctor did. Was she entitled to damages?

COURT'S ANSWER: No.

The Kansas City Court of Appeals set aside an award of $1,500 damages to the patient. The higher court decided that a doctor is not liable to those visiting his office on business for injuries resulting from a defective condition unless the condition is one he knew or ought to have known existed in time to have had remedied or to have warned visitors about. The court further decided that, even if the doctor was negligent in this respect, the plaintiff was not entitled to collect damages if, as the evidence showed, she was fully aware of the danger involved (241 S. W. 2d 13).

¶Claims against doctors for injuries to patients and other business visitors are frequent enough to justify the exercise of particular pains to prevent risks of accidents to them.—A.L.H.S.

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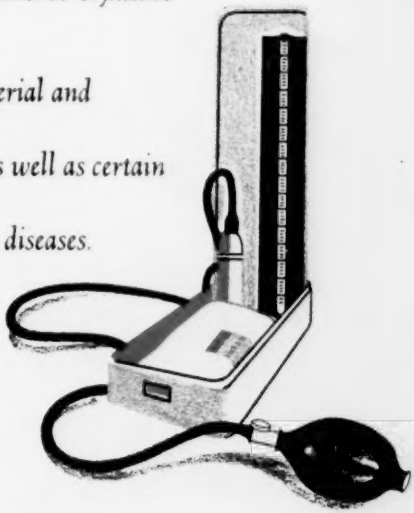

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Nodules *in the* Breast

is biopsy always necessary?

A Modern Medicine Editorial

Most authorities agree today that any definite nodule found in the breast should immediately be biopsied. Even when the little tumor is encapsulated and movable in the breast tissue, and even when the surgeon is pretty sure that it is benign, usually he must remove it because he cannot assure the woman that she is safe. Every so often a smooth, apparently benign nodule proves, on biopsy, to be cancerous.

The woman who commonly does not need a biopsy is the one who, throughout her life, has had generalized mastitis in both breasts. Her chains of glands are shotty and a little larger than normal. Often the story is that for years the breasts have been painful during menstruation. Hundreds of thousands of such women, with apparently some defect in the functions of their glands of internal secretion, suffer all their lives with such nodular and uncomfortable breasts, but cancer never develops. I remember a time, many years ago, when I took a woman of 40 to a leading surgeon for advice about a lumpy breast of this type. He said, "I'll do a simple mastectomy." The woman was so shocked at this that I took her to another surgeon. He pointed out that if he were to remove one breast he'd have just as much reason to remove the other, and so he advised waiting. He was right, and she lived out her life without getting any more disease in her breasts.

In many of these cases, what the woman calls a lump can be felt to be made up of several chains of the oversized glands, somewhat adherent in one place. An experienced surgeon refuses to biopsy such a pseudo-tumor because he feels so

sure it is harmless. Every so often I see a woman with a nodule just beyond the edge of the breast. This enlarges and is painful during menstruation and practically disappears between periods. It would seem to be an aberrant bit of breast tissue, apparently harmless.

I often wonder why surgeons so often make a big ugly scar on the breast when removing a nodule for biopsy. Why can't they close the wound neatly as they would if it were on the face?

Or, better yet, why don't they more often use the Warren incision which leaves an almost invisible scar in the thoracomammary fold? A second great advantage of this incision is that it permits access to the whole breast, particularly the back. When the pathologist has demonstrated a breast containing the cheesy cysts of Schimmelbusch's disease, I have been impressed by the number of nodules on the back that could not be felt from the front. When a breast is somewhat atrophic and loosely attached to the chest wall, one can usually lift it up and turn it in such a way as to palpate the back of it.

WALTER C. ALVAREZ

Recognition of Root Pain

It is unfortunate that at college few physicians were taught to recognize at a glance the spinal root type of pain. This is sad, because today, for lack of immediate recognition of root pain, many a person is subjected to a useless laparotomy.

The operation would never have been performed if the physician had only said to the patient, "Take your hand and show me just where the pain is in your 'stomach.' " Then, as the patient ran his hand slantingly down along the course of some one spinal nerve the doctor would say to himself, "That must mean irritation from some arthritic lesion in the spine, or possibly from a lesion on a spinal nerve."

Then the doctor would ask and find that the pain had nothing to do with eating. Instead, he might learn that it was made worse by resting and much better by getting up and walking about. Then he would know that it was due to spinal arthritis. Or, on finding that the man dreaded to sneeze or cough, he would suspect a little tumor in the spinal canal.

W. C. A.

Intestinal Obstruction from Matting

HOWARD MAHORNER, M.D.*
Louisiana State University, New Orleans

DENSE adherence of small bowel to omentum and to an old incisional scar, with induration and edema of the whole mass, may cause chronic partial intestinal obstruction, requiring immediate surgical intervention.

This matting syndrome is now recognized as a definite entity. The patient usually has had a lower abdominal operation. After several years, intermittent pain and soreness appear in the right lower quadrant near the abdominal wall scar. The attacks may be accompanied by slight nausea and the sensation of a knot beneath the old scar.

The episodes become more frequent and intense, but seldom are acute. Cramps and vomiting are rare. Persistence of the soreness is typical, with associated constipation.

The patient is well nourished and does not look ill. Physical examination may reveal only slight tenderness in the region of the old wound and a sensation of an indefinite mass or resistance in that area, states Howard Mahorner, M.D. The abdomen may be distended, but auscultation is unrevealing. The patients are usually emotionally stable.

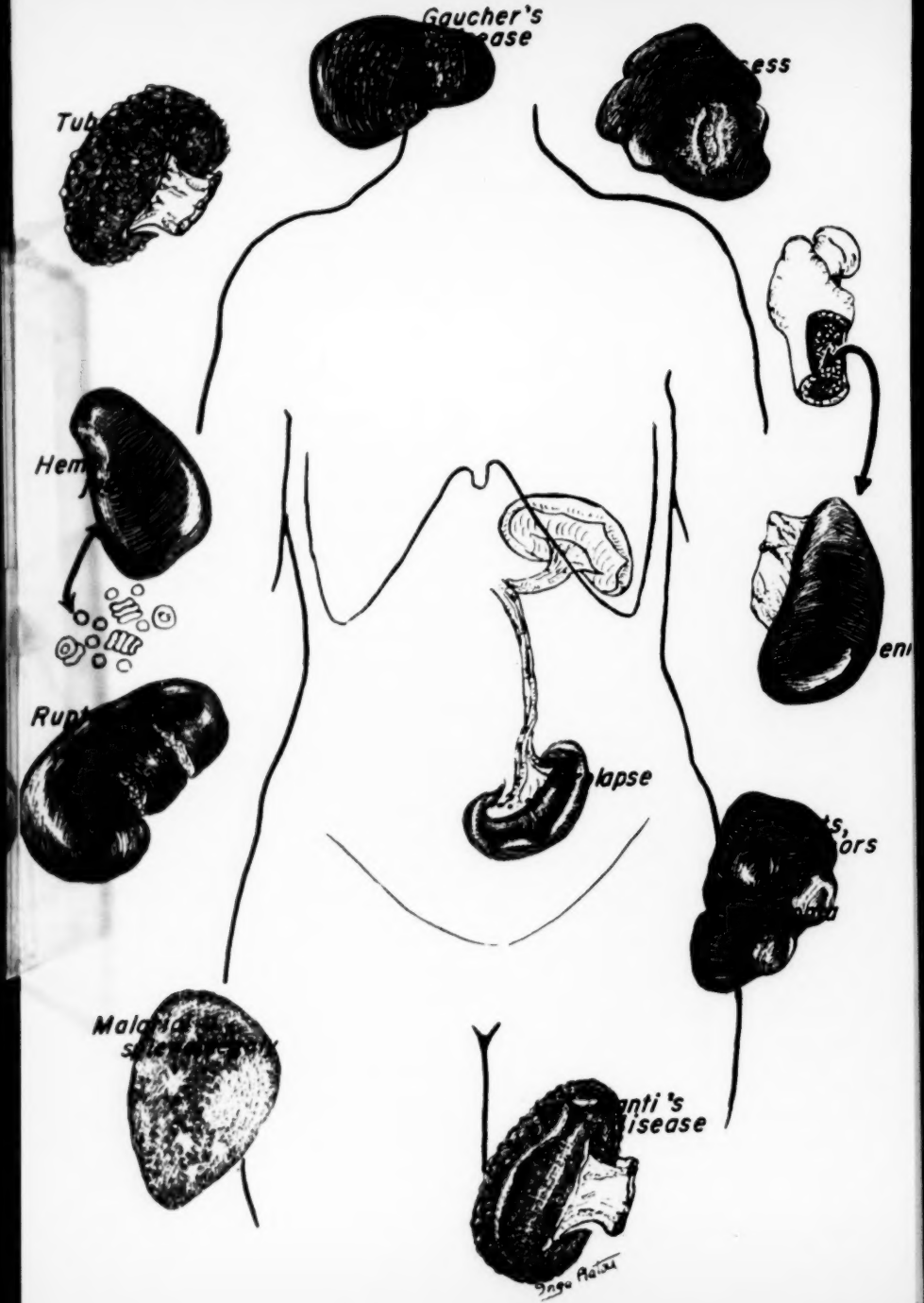
Gastrointestinal roentgen examination reveals no small bowel stasis, and the laboratory reports are ordinarily negative.

Decompression for a few hours with a Miller-Abbott tube is sufficient to get the patient in proper condition for operation. Delaying surgery for further decompression is hazardous, since the systemic manifestations of toxemia may only be suppressed by the antibiotics administered and strangulation may exist even without severe tenderness.

Adequate exposure is imperative. Since simple lysis of adhesions will not give permanent relief, the entire mass of indurated omentum is excised and the adhesions are carefully released. Segments of intestine matted together by adhesions must be resected in about a quarter of cases. Instillation of foreign materials such as papain, heparin, and amniotic fluid cannot be depended upon to prevent the re-formation of the adhesions.

If the bowel is greatly distended, decompression by suction tip often makes replacement of the intestine easier at the end of the procedure. In severely obstructed cases with peritonitis, one to three enterostomy tubes are placed at different levels in the small intestine to diminish the necessity for prolonged use of an indwelling transesophageal gastric decompression tube. An enterostomy tube proximal to an anastomosis may be lifesaving and should be used.

* The matting syndrome: a type of intestinal obstruction. New Orleans M. & S. J. 104:17-22, 1951.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Indications for Splenectomy

D. P. HALL, M.D.*
University of Louisville, Ky.

ALL functions of the spleen except that of blood storage may be adequately assumed by other organs.

Splenectomy is followed by a transient secondary anemia, leukocytosis, and eosinophilia; an augmented resistance to hemolytic agents; a decreased tendency to jaundice; and an increase in thrombocytes, entailing reduced clotting time.

The grave danger from the procedure is postoperative thrombosis, warns D. P. Hall, M.D. Anticoagulants may be useful in prevention or therapy of this complication.

Immediate treatment for shock and prompt splenectomy are necessary to prevent death after *traumatic or spontaneous rupture* of the spleen. The latter condition may result because of overdistention from acute fever, septic splenitis, malaria, typhoid fever, or subacute bacterial endocarditis. Conservative surgical procedures, such as splenorrhaphy or packing of splenic lacerations, are unsafe because of possible delayed hemorrhage.

Small ruptures of the spleen, not involving the hilus, usually close without being recognized. The rents are repaired by plugging from the great omentum or by coagulum.

Abscesses of the spleen may be caused by infected hematomas, septic infarcts with bacterial endocarditis or septicemia, acute fevers of enteric origin, or extension from contiguous suppurative lesions. If possible, splenectomy should be done.

Splenectomy eradicates a large focus of reinfection in *splenic tuberculosis,* if the disease is not active in other parts of the body. The operation may be advisable for *chronic malarial splenomegaly* because of the danger of spontaneous rupture, prolapse, torsion, or the spleen's becoming a reservoir for reinfection after partial correction of the primary disease.

Splenic excision is curative for patients with *primary splenic neutropenia* resulting from a selective form of hypersplenism in which maturation of granulocytes is inhibited.

Banti's disease, splenic anemia, causes pallor, anemia, weakness, leukopenia, and abdominal discomfort associated with splenomegaly. Portal congestion with varicosities of the coronary veins frequently produces hematemesis. Jaundice and ascites also occur. Preoperative correction of plasma protein deficiencies and splenectomy may be of benefit in many relatively early cases. In advanced cases, complimentary ligation of coronary veins should be considered. Splenectomy should not be done if the platelet count is high with splenic anemia because of the likelihood of thrombosis of splenic, portal, or mesenteric vessels.

* The spleen, a few surgical aspects. Am. Surgeon 17:376-390, 1951.

The hazard of pregnancy is increased after splenectomy for splenic anemia, since hepatomegaly and ascites often occur.

Splenectomy may be beneficial when conservative measures bring no relief in cases of *thrombocytopenic purpura,* a symptom complex with a constitutional tendency to hemorrhage. Repeated transfusions are given to decrease the danger of immediate surgery. Recurrent hemorrhages after removal of the spleen may be attributable to accessory splenic tissue.

Congenital spherocytic hemolytic jaundice is associated with splenomegaly, erythrocytic fragility, anemia, jaundice, and spherocytosis. The hemolysis is corrected by splenic removal, but the spherocytosis and fragility remain.

Splenectomy performed for thrombocytopenic purpura and congenital spherocytic hemolytic jaundice does not increase the hazards of pregnancy for mother or fetus, despite increased incidence of hemorrhage.

Hydatid and retention cysts and *benign tumors* of the spleen are far less frequent than *lymphosarcoma, hemangioendothelioma, spindle-cell sarcoma,* and *secondary carcinoma.*

A wandering or prolapsed spleen is not rare. Complications from moderate torsion, such as acute engorgement, may ensue. Splenopexy is usually successful except for *splenomegaly,* when splenectomy must be substituted.

Intestinal Volvulus from Lead Poisoning

KNUTE E. BERGER, M.D., AND EINAR A. LUNDBERG, M.D.*

THE intestinal disturbance induced by lead poisoning may cause volvulus, especially in a person with a large sigmoid colon or other predisposing factor. If brief conservative measures are not effective, surgical detorsion or resection should be done without delay.

Lead poisoning may produce colicky pain and other symptoms of intestinal obstruction. The diagnosis is facilitated by intravenous administration of calcium, which relieves pain of pure plumbism but increases symptoms of volvulus.

Knute E. Berger, M.D., of Seattle, and Einar A. Lundberg, M.D., of St. Francis Hospital, Hartford, Conn., observed 5 instances of torsion apparently resulting from plumbism, 4 involving the sigmoid and 1 the small bowel. Surgery was successful in 4 cases, but failure to operate resulted in 1 death.

The patients were all lead workers from a Peruvian smelter at an elevation of 12,200 ft., where hypoxia often upsets gastrointestinal function. Like most natives in the locality, all had sigmoids up to 3 ft. long, with narrow, pedicle-like mesosigmoids.

* Intestinal volvulus precipitated by lead poisoning. J.A.M.A. 147:13-16, 1951.

Surgery in Poliomyelitis Therapy

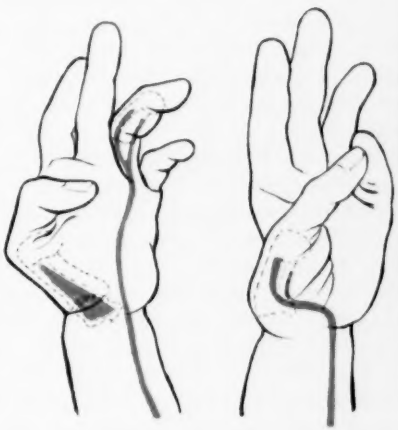
HALFORD HALLOCK, M.D.*
Columbia University, New York City

WHEN spontaneous improvement and favorable progress from physical therapy are no longer expected, surgery may be needed as a rehabilitative measure in the residual stage of poliomyelitis or during convalescence.

Procedures discussed by Halford Hallock, M.D., improve function and eliminate or reduce brace wearing by correcting deformities, stabilizing or reconstructing the articular structures, and overcoming discrepancies in leg length. Adequate physical therapy will be needed after the operations, especially to reeducate transplanted muscles.

Shoulder—If the patient cannot lift his arm because the abductor and external rotator muscles are paralyzed, but the scapular elevators have not lost strength, arm elevation can be restored by arthrodesis of the shoulder joint with the arm in the salute position. The operation should not be done until bone development is sufficient, usually about the age of 15. A functioning hand and elbow are prerequisites.

Elbow—If the hand is useful, flexion may be restored to the elbow by transferring the origin of the flexor-pronator muscles to a higher position on the humerus. This procedure increases the leverage and power of the muscles as substitutive flexors. Best results are obtained if the biceps and brachialis anticus muscles retain some power.



Forearm, wrist, and hand—Pronation and supination deformities of the forearm result from muscle imbalance. By fusion of the wrist in 25° extension, function of the hand is enhanced, the forearm does not lose mobility, and wrist flexors or extensors may be utilized as transplants to overcome paralysis of thumb and finger muscles.

The most important transplant is the flexor sublimis tendon of the fourth finger to the first metacarpal for paralysis of the opponens pollicis (see illustration), although the palmaris longus or radial or ulnar flexor of the wrist may also be used.

Sometimes, when a transplant is

* The surgical treatment of poliomyelitis. S. Clin. North America 31:397-415, 1951.

not feasible, a bone graft between the first and second metacarpals will fix the thumb so that grasp or pinch is possible with fingers flexed against the thumb.

Spine—Spinal fusion corrects paralytic scoliosis, the result of an imbalance in the spinal or axioappendicular muscles. Fusion may be done at any age but not before the limits of the primary curve or curves of the scoliosis are known. Usually after the age of 16 years spinal development is complete and the curvature does not greatly increase.

Initial correction is obtained by a hinge-turnbuckle jacket. The buckle is adjusted daily to bend the ends of the spine gradually opposite to the curve. Double primary curves are handled with a transection or shift jacket. After the primary curve has been corrected as far as possible or trunk alignment and balance obtained, the jacket is reinforced and cut out for operation. Since only four or five vertebrae should be fused at one time, two or three operations several weeks apart are required. The original jacket is worn for sixteen weeks after the last operation. Then one in which walking is possible is substituted and changed every two or three months until roentgenograms reveal mature fusion.

Hip—Flexion deformity of the hip is a sequela of muscular imbalance produced by weakness of the extensor or abdominal muscles or both. If disability is severe, the origin of the tensor fascia femoris muscle and any other contracted fibrous structures are divided. If the deformity is caused by weak abdominal muscles, the anterior portion of the pelvis may be partially held up by subcutaneous transplantation of strips of fascia lata from the symphysis pubis to active upper abdominal rectus muscles or from the anterosuperior iliac spines to the lower ribs after the deformity has been corrected.

The hip is fused for severe limp from extensive paralysis of the hip muscles and for paralytic dislocation. Prerequisites are adequate abdominal and quadratus lumborum muscles, sound knee ligaments on the affected side, a stable foot and ankle, and a functioning opposite leg. The best attitude for a stiff hip is approximately 30 degrees of flexion, neutral rotation, and lateral position, with 10 or 15 degrees of abduction to compensate for considerable shortening. A stiff hip is sometimes inadvisable, particularly with bilateral involvement. In such cases, a bony shelf formed just above the femoral head will stabilize the joint.

Knee—Flexion deformity of the knee may occur as a result of quadriceps weakness with preservation of flexor power. Early or slight deformity is corrected by wedging plaster casts, but, for severe cases, the hamstring tendons are lengthened and the femoral attachment of the capsule is cut.

With bony articular deformity, a supracondylar osteotomy is performed and the leg extended to 180 degrees. When roentgenograms reveal that the apparent flexion deformity is caused by anterior bowing of the lower end of the femur or the upper portion of the tibia, an osteotomy of the deformed bone is done. For recurvatum at the joint, the periosteofascial plastic operation

of Gill may be used, with shortening of the posterior structures and creation of a strong check ligament.

Knee fusion provides the greatest degree of stability for quadriceps paralysis, but motion is sacrificed. Only unilateral cases are suitable. The simplest method is to provide brace support with a lock joint at the knee which allows flexion when sitting, although the patient then becomes dependent on apparatus. Operation is usually deferred until a child is old enough to determine whether he prefers a stiff knee or a brace.

Ankle and foot—Deformities in the ankle and foot are corrected and unstable joints fixed by arthrodesis, followed by tendon transfer. With calf muscle contracture and equinus deformity, the calcaneal tendon may be lengthened with or without fusion or tendon transplantation. Since a short calf muscle may stabilize the knee, the procedure is not done if the quadriceps are paralyzed.

Subtalar triple arthrodesis is used for lateral instability and deformity of the foot after the patient is 10 years of age and bone development is adequate. Cartilage and bone are removed to correct all components of the deformity without tension of soft tissue structures. Good alignment of the foot is very important.

With anteroposterior instability or paralysis of the calf muscle, arthrodesis of the ankle is advisable. The fusion should not be done before 14 or 15 years of age to avoid premature closure of the anterior portion of the epiphyseal plate. The optimum position for the stiff ankle is 10 or 15 degrees of equinus.

Moderate cavus deformity of clawfoot is corrected by anterior tarsal resection, the removal of a wedge of bone with base dorsally through the naviculocuneiform articulations and the center of the cuboid. If cavus is pronounced, a subtalar triple arthrodesis is used. The overactive long toe extensors are transplanted to the tarsal or metatarsal region.

For equinovalgus, transplantation of the peroneus longus into the insertion of the paralyzed anterior tibial muscle and into the medial or first cuneiform bone removes the deforming force of the peroneus and somewhat restores active dorsiflexion at the ankle. The procedure is preceded by subtalar arthrodesis for stability of the foot.

Transplantation of the long toe extensor tendons to the middle or second cuneiform corrects the intrinsic muscle imbalance causing deformity of clawfoot. The interphalangeal joint of the great toe must be arthrodesed to avoid hammertoe, and bony deformity of the arch should first be corrected by subtalar arthrodesis or anterior tarsal resection. Any calf muscle contracture is corrected by lengthening the calcaneal tendon.

Arrest of epiphyseal growth by metal staples, curettage, or bone grafts is the simplest surgical method of dealing with unequal leg length, but must be done before maturity. Staples may be removed if further growth from the epiphyseal line is necessary.

Shortening the femur of the longer leg with internal fixation to maintain alignment is accompanied by far less risk than lengthening of the femur and tibia of the affected limb.

Sexual Function after Sympathectomy

GEORGE P. WHITELAW, M.D., AND REGINALD H. SMITHWICK, M.D.*
Boston University

Surgery of the autonomic nervous system may have deleterious effects upon sexual function in the male. The incidence and nature of dysfunction depend upon the type of operation performed.

Sympathectomy may cause impairment of erection or a loss of effective ejaculation or both. Of 161 male patients questioned by George P. Whitelaw, M.D., and Reginald H. Smithwick, M.D., approximately 2 of every 5 noted loss of some sexual function after sympathectomy. Erection was affected in 27.5%; 20% lost power of ejaculation permanently.

Transthoracic sympathectomy combined with bilateral splanchnicectomy is most apt to be followed by trouble in attaining erections. Ejaculation, however, is never permanently abolished after the transthoracic operation, which involves removal of the sympathetic ganglia from the first or second through the eleventh or twelfth thoracic level.

The lumbodorsal procedure may cause loss of erection or ejaculation or both. One or the other function is lost more than 20% of the time. In this procedure, sympathetic ganglia are removed from thoracic 7, 8, or 9 through lumbar 1, 2, or 3, and splanchnicectomy is done.

Bilateral removal of the upper lumbar ganglia frequently results in interference with erection and permanent loss of ejaculation. Unilateral removal of these ganglia is less apt to cause sexual impotence.

Since the ejaculatory reflex travels via the sacral parasympathetic pathways, orgasm may still be possible postoperatively, but little or no semen is ejected. The tonus of the internal sphincter of the bladder is lost when sympathetic control of the sphincter is abolished. Therefore, after sympathectomy, semen enters the bladder instead of passing out the urethra.

The first lumbar ganglion of a young adult male should be preserved on one side whenever possible.

Surgery confined to the lumbar sympathetic chain will also disturb sexual function in about one-third of cases. Erection may be incomplete after this operation probably because of an increased sensitivity of the penile vessels to circulating adrenin. The erectile tissues of the penis are thus less readily engorged.

Since sexual function is so frequently impaired after some types of sympathectomy, the patients should be forewarned and asked to help decide about the operation. Most patients with serious cardiovascular disorders prefer to disregard possible sexual alterations.

For women, no change of sexual function follows sympathectomy. Occasionally a slight loss of sensory response to intercourse is noted.

* Some secondary effects of sympathectomy. New England J. Med. 245:121-130, 1951.

Periodic Disease

HOBART A. REIMANN, M.D.*
Jefferson Medical College, Philadelphia

A NUMBER of disorders of unknown cause have regular cycles of recurrence. The diseases are usually benign, recur over decades of time, and resist treatment.

Hobart A. Reimann, M.D., believes that various forms of cyclic disease are subdivisions of a newly established syndrome, periodic disease. Included are:

Periodic fever
Periodic abdominalgia
Periodic arthralgia
Periodic neutropenia
Periodic purpura
Periodic edema or urticaria

The disorders often begin in early infancy and, once established, ordinarily recur with very little change throughout life. Except for disability during the attacks, patients are usually well.

In some cases, the severity of the episodes gradually diminishes as the cycles lengthen, or occurrences may cease spontaneously for several months or years or during pregnancy, only to start again in unchanged rhythm without evident cause.

The frequent onset of periodic disorders in early infancy suggests a congenital origin. A hereditary influence is sometimes evident, but the immediate cause of periodic disease is best explained on the basis of a vasomotor disturbance. What controls the rhythm or why certain persons are victims remains a mystery.

Bouts of *periodic fever* may be accurately predictable to within a day or two. Tachycardia, chills, sweating, headache, general aching, malaise, anorexia, nausea, and vomiting, besides a rise in temperature up to 104° F., are commonly noted. Chest, abdominal, and joint pains may be prominent. Occasionally, flushing and puffiness of the face and generalized edema or urticaria are noted. The erythrocyte sedimentation rate increases, and leukopenia or leukocytosis with monocytosis or eosinophilia may occur.

Sometimes the patients are sick enough to be confined to bed during an attack, but good health is enjoyed between the recurrences, and loss of weight or other evidence of chronic disease is rare. Treatment is primarily supportive with analgesics and sedatives, but cortisone may lessen the severity of subsequent spells.

Recurrent dull or cramp-like abdominal pain, often in the right lower quadrant and associated with muscle rigidity, is the chief symptom of *periodic abdominalgia*. The disease should be recognized to avoid unnecessary laparotomy.

Fever and leukocytosis are common, and sometimes salivation, nausea, vomiting, and diarrhea appear. Concurrent pain in the chest, joints, and muscles, urticaria, and other symptoms of vasomotor dysfunction,

* Periodic disease. Rhode Island M. J. 34:365-369, 377, 1951.

as well as knowledge of similar previous episodes, aid in diagnosis.

Although benefit may be obtained by removal of an offending allergic agent or the use of diphenylhydantoin sodium, treatment is usually unsatisfactory.

The cycles in *periodic arthralgia* last from two days to several weeks, and the attacks from a few hours to ten days. Temperature is seldom elevated but simultaneous abdominalgia, urticaria, and angioneurotic edema are not uncommon.

Some patients have a purpuric eruption over the affected joints suggesting Schönlein's purpura. Articular effusion is rare. More than one member in a family may be afflicted.

Diagnosis is established by the duration of the disease for decades without deformity of the joints or other effects on the health and by the lack of laboratory evidence of abnormality. Pain may occasionally be relieved by analgesic drugs. Aspiration of fluid, if present in large amounts, may be helpful.

The most striking feature of *periodic neutropenia*, which may begin in infancy or after the age of 60, is the regular cyclicity of about twenty-one days. A diminution in the number of neutrophilic cells in the marrow is followed closely by a similar decrease in the peripheral blood lasting up to ten days. Pronounced leukopenia results in stomatitis, furuncles, cutaneous or other abscesses, and ulcers of the oral, pharyngeal, and anal mucosa.

Fever, chills, malaise, and anorexia are frequent; arthralgia, abdominalgia, splenomegaly, and enlarged cervical lymph nodes are less common. Some persons have normal total and differential white blood cell counts between episodes but for others the neutropenia or the panleukopenia is continuous. Therapy is usually unsatisfactory.

Episodes of nonthrombopenic purpura, edema, urticaria, abdominalgia, and arthralgia which may recur regularly for decades characterize *periodic purpura* and *periodic edema*. The similarity of the signs and symptoms to reactions known to be caused by hypersensitivity to specific proteins or drugs suggests an allergic etiology, but efforts to discover an offending protein, the use of antihistamines, and attempts at desensitization are usually futile.

¶ **COUGH RELIEF** may be effectively achieved by Robitussin. The drug, which is an expectorant, combines 100 mg. of glyceryl guaiacolate and 1 mg. of desoxyephedrine hydrochloride in 5 cc. of aromatic syrup. Results excelled those from terpin hydrate and ammonium chloride in 52 cases of tuberculosis. Leo J. Cass, M.D., and William S. Frederick, M.D., of the Cambridge Tuberculosis Sanatorium and Harvard University, Boston, and the Royal Dutch Air Lines gave each remedy to all subjects for a week at a time. Robitussin increased secretions in the respiratory tract almost 200%, lessened cough, and had inconsequential side effects.

Am. Pract. 2:844-851, 1951.

The Myth of Bed Rest for Heart Disease

SAMUEL A. LEVINE, M.D.*
Harvard University, Boston

THE failing heart obtains more rest with the patient in a comfortable chair, and feet down, than in any bed now available, even the so-called cardiac type.

If congestive failure is evident or impending, the patient should sit in a chair most of the day. When the patient is in bed, 8- or 9-in. blocks should be placed under the head posts, to keep excess fluid from settling in the lungs.

Most people with acute coronary thrombosis can sit up as soon as pain is controlled, sometimes a few hours after admission. By introducing upright posture, Samuel A. Levine, M.D., reports that in 70 cases mortality was reduced to 10% from the former rate of 15% with strict bed rest.

Paroxysms of nocturnal dyspnea, relieved by sitting or standing erect, may be associated with left ventricular failure due to hypertensive, aortic valvular, or coronary artery disease, or occasionally with advanced mitral stenosis. Pulmonary engorgement develops in such states because the right ventricle propels more blood into the lungs than the left ventricle can pump out. With a surplus of only 1 drop per beat, 500 cc. may accumulate within two hours. Output of the two sides should be equal.

The heart of a healthy person in bed easily adjusts to shifts of fluid but, with congestive failure, work of the right ventricle may be increased. The blood flows less rapidly within twenty-four hours, and vital capacity of the lungs is reduced about 200 cc.

During hypertensive failure, recumbency for twelve hours results in hemodilution, greater blood volume, and higher venous pressure, the very changes that treatment aims to correct. Disaster would be more frequent without the benefit of digitalis, diuretics, and a low salt diet.

Attacks of dyspnea are relieved by head blocks alone in many cases. However, even adjustable beds do not have all the advantages of a chair, since raising of the back leaves the feet as high as the hips. Cardiac beds do not bend properly at the knees.

The chair should be sturdy, with broad arms and foot rests, if possible. For home care, the physician can select the most comfortable one in the house by personal trial.

The individual with congestive heart failure is generally seated for most or all of the day, from the time of admission. He may lie down at intervals for a nap or change of position and sleep in bed at night. Massive anasarca forces a few to sit up day and night.

Acute coronary thrombosis requires the upright treatment im-

* The myth of strict bed rest in the treatment of heart disease. Am. Heart J. 42:406-413, 1951.

mediately after subsidence of pain. Narcotics or sedatives usually take effect in a day or less. The patient is then helped into his chair and remains inactive, being fed by an attendant if necessary.

He is given a commode for defecation and a urine bottle. If he is in fairly good condition at home, he may take a few steps to the bathroom for bowel movements. Some prefer to return to bed in a few hours, others sit all day, but as a rule, the more time up the better.

The major contraindication is profound shock from forward or peripheral heart failure. The head should be low during total unconsciousness, but upright posture often improves cerebral symptoms such as delirium.

Effects on a patient in a semiconscious, irrational state with Cheyne-Stokes breathing can be miraculous, after futile trial of oxygen, quinidine, and other expedients.

Hospital or home care is simplified by curtailment of bedside nursing. The invalid's mental outlook is much happier than throughout the ominous quiet of absolute bed rest. Urinary retention is less likely, physical strength returns faster, and convalescence is more rapid. After coronary thrombosis, walking about is started in three or four weeks, and activities are then increased by degrees.

¶ DIABETIC COMPLICATIONS are most readily met with NPH insulin, which has both rapid and prolonged action. Charles R. Shuman, M.D., and Robert B. Francis, M.D., of Temple University, Philadelphia, report satisfactory results for 33 patients who were hospitalized for surgery, infection, or other condition. If post-breakfast blood sugar was high, 10 to 15% of the morning carbohydrate was shifted to an afternoon or bedtime meal, or a little regular insulin was added. In case of coma or other serious condition, regular insulin was given for a few days, alone or as a supplement.

Am. J. M. Sc. 222:179-185, 1951.

¶ ANTICOAGULANT NO. 63, 4-hydroxycoumarin, lengthens prothrombin time more rapidly, maintains values better with a fixed dose, and causes microscopic hematuria less than half as often as dicumarol. Royal Rotter, M.D., and Ovid O. Meyer, M.D., of the University of Wisconsin, Madison, report use of the drug in 124 cases. The initial dose is 2 mg. per kilogram of body weight, none is given the second day, and subsequent amounts are governed by effect. If prothrombin time is 20 to 40% of normal, 25 mg. is administered daily. In 78% of cases, therapeutic levels are reached in twenty-four to forty-eight hours. The best antidotes are vitamin K_1 and, possibly, K_3 oxide.

Arch. Int. Med. 88:296-309, 1951.

Symptoms of Renal Impairment

L. H. NEWBURGH, M.D., AND AUGUSTO A. CAMARA*
University of Michigan, Ann Arbor

In glomerulonephritis, symptoms do not correlate well with the severity of glomerular damage; however, measurement of the glomerular filtrate does indicate the extent of renal impairment and the rate of progression of the disease.

Frequently the initial stages of glomerular nephritis are symptomless and are detected solely by urinary abnormalities. Occasionally, nephritic patients consult a physician because of edema but are unaware of any preexisting kidney disease. Some patients with edema have anorexia, nausea, distention, serious visual disturbances, and incapacitation. Removal of the edema may alleviate all symptoms, although the laboratory examinations continue to reveal far-advanced nephritis.

Patients with glomerulonephritis may be quite comfortable even though the volume of the glomerular filtrate is reduced to 10% of normal or less. Evidently the accumulation of nitrogenous metabolites does not cause subjective disturbances, since such individuals regularly have pronounced azotemia. The rate of elimination of nitrogenous wastes of protein metabolism approximates the rate of production even with far-advanced nephritis, according to L. H. Newburgh, M.D., and Augusto A. Camara.

The rate of increase of the blood urea nitrogen is the same as the rate of decrease of the volume of the glomerular filtrate, disregarding changes in per cent of urea reabsorbed by the tubules and changes in urea production. Under these circumstances the product of the concentration of blood urea and the volume of the glomerular filtrate is approximately a constant. If the glomerular filtrate is reduced and the blood urea nitrogen is elevated, the amount of urea filtered is similar to that when filtration rate was normal. If tubular reabsorption of urea is large, blood urea nitrogen is high, whereas if reabsorption is small, the blood urea nitrogen is low, other factors being equal.

A normal individual absorbs about 70 mEq. (2.7 gm.) of potassium daily. With a normal glomerular filtrate of 150 liters and normal serum potassium concentration of 5 mEq. per liter, 750 mEq. (29 gm.) of potassium is delivered to the tubules, where 680 mEq. is reabsorbed and 70 mEq. is excreted in the urine, thereby maintaining potassium balance.

Patients who have severe nephritis are usually able to maintain normal serum potassium concentration despite a greatly reduced glomerular filtrate volume, accomplishing this

* Lack of correlation between symptoms and degree of renal impairment. Ann. Int. Med. 35:39-44, 1951.

by active secretion of the ion by the tubules. When little potassium is ingested by such patients the diminishing volume of glomerular filtrate is actually beneficial in the sense that less potassium is lost by filtration.

With severe nephritis, sulfate and phosphate concentrations are elevated, since the glomerular filtrate containing 1 to 2 mEq. per liter of these substances requires a filtrate volume of at least 25 liters per twenty-four hours to prevent accumulation in the plasma. These two anions will replace bicarbonate and will lead to acidosis, but so slowly that the change in respiratory volume is too small to be detected subjectively.

Increases in plasma phosphate, however, are accompanied by decreases in plasma calcium which, if sufficiently severe, sometimes cause muscle cramps.

The development of edema is attributed to loss of serum albumin and is unrelated to the changing volume of the glomerular filtrate.

Little correlation exists between the severity of anemia and the degree of impairment of glomerular function. Symptoms of grave anemia, however, can be temporarily abolished by sufficient transfusions of blood.

Estimating the Basal Metabolic Rate

I. JACQUES YETWIN, M.D.*

By a formula utilizing the pulse rate and pulse pressure, the basal metabolic rate may be estimated approximately. Though not a substitute for an actual basal metabolism test, the information may be used for screening purposes in determining pronounced disturbances in the thyroid, suprarenal, pituitary, or pancreatic glands.

Patients are instructed to get at least nine hours of sleep the night before the test, and neither eat nor smoke in the morning. The bladder is emptied before the forty-five-minute rest period preceding the test.

For over 50% of 144 patients, I. Jacques Yetwin, M.D., of the American International College, Springfield, Mass., found the following formula to approximate the true basal metabolic rate:

$$BMR = (PR + PP) - 124$$

where PR is pulse rate per minute, and PP is the pulse pressure (systolic minus diastolic) of a doubly checked blood pressure measurement.

The greatest discrepancies among results with the formula or through actual testing occur among patients with systolic pressures over 140, diastolic pressures about 90, and pulse rates of about 100.

* A new formula for a clinical means of estimating basal metabolic rates. Mil. Surgeon 109:129-131, 1951.

Water and Salt Balance in Heart Failure

GEORGE E. MILLER, M.D.*
University of Buffalo, N.Y.

Too much water collecting in the body may be the initial cause of edema in congestive heart failure, rather than excess of sodium, as generally believed.

During recovery, the loss of water from extracellular fluid is proportionately much greater than decrease in sodium and chloride content, reports George E. Miller, M.D. Elaborate metabolic study of progressive failure is hardly possible, but changes are probably exactly opposite to those occurring as edema subsides.

Metabolic balance studies of sodium and chloride were made for 7 patients during convalescence from congestive heart failure at the Buffalo City Hospital. The cardiac disorder of 2 subjects was arteriosclerotic, of 2 hypertensive, in 2 associated with cor pulmonale, and in 1 with a rheumatic condition. The latter patient was studied during two episodes.

Treatment consisted chiefly of bed rest and digitalis, without restriction of fluids. If improvement was unsatisfactory, mercurial diuretics were prescribed. Saline cathartics, Phospho-soda or effervescent sodium phosphate, were given in 6 cases, with the sodium computed as part of the daily intake.

In the recovery intervals, metabolic analyses lasting three days apiece were undertaken. Changes in total body water were measured by body weight.

A fasting blood specimen was obtained every morning. Sodium and chloride levels of blood serum were estimated, as well as intake of each in food, output in feces and urine, and daily amounts lost or gained by the body.

At the start of a metabolic period, extracellular fluid volume was calculated by dilution of sodium thiocyanate. Alteration at the end was determined from the chloride space, which was deduced from the chloride balance and the serum chloride value.

In each recovery period, more water was lost from the body than could be accounted for by the sodium balance. Pitting edema disappeared and body weight fell in all cases.

If 1 kg. of weight decrease represented 1 liter of water from extracellular fluid, then the normal sodium content, 150 mEq., should have left the body with every kilogram, but in no case did this occur.

Furthermore, in 26 unselected cases of heart failure, the average concentration of sodium in serum was distinctly less than in a healthy group.

In 7 of the 8 convalescent periods observed, the total edema fluid excreted contained less chloride than could be expected from extracellular fluid alone. Therefore some of the water must have come from tissue

* Water and electrolyte metabolism in congestive heart failure. Circulation 4:270-277, 1951.

cells, implying that during decompensation water moved into cells.

Obviously, congestive heart failure involved not only disordered filtration and absorption of sodium but a fault in handling of water.

Other observers have found antidiuretic material in urine during edema caused by heart disease, cirrhosis, the nephrotic syndrome, and acute glomerulonephritis. Although the substance has not been identified, the posterior pituitary may be directly or indirectly responsible.

Mass Radiography in Diagnosis of Tuberculosis

V. H. SPRINGETT, M.D.*

WHEN mass radiography is being done in a community for the first time, major emphasis should be directed toward examination of the greatest possible number of people. Later surveys should be concentrated upon individuals under 35 years of age.

V. H. Springett, M.D., of the Royal College of Physicians of London bases these practical conclusions on the fact that initial surveys of an area reveal more cases of active disease than do later studies and that repeated roentgen surveys show the highest incidence of new lesions in young adults.

Mass radiography yielded the following cases of disease on re-examination of individuals found free of tuberculosis in a previous mass survey in a section of London: women 3.5 per 1,000 at 15 to 24 years; 2 per 1,000 at 25 to 34; 0.5 per 1,000 over 34. Men, 3 per 1,000 at 15 to 24; 2 per 1,000 at 25 to 34; 1 per 1,000 at 45 to 59. Thus, few new cases of tuberculosis are revealed by repeated examination of men over 35, and practically none of women past that age. A group of cases with symptomatic onset not included in the statistical analysis gives a similar age and sex frequency distribution, suggesting that the calculated rates may be too low in absolute value, but supporting the general trend.

Both attack and death rates are high for young women and fall to a low level later. For males, the highest attack rate also occurs in young adults, but the maximum death rate comes later, with the rate at 60 years nearly double that in young adults, probably because of breakdown of lesions that were unrecognized for years.

In the United States, results of routine annual fluoroscopic examination of an office group during 1930-39 showed an attack rate of 3 per 1,000 in young adults aged 17 to 29 of either sex, of 1.4 per 1,000 of those over 40 for the first five years of the survey, and as low as 0.4 per 1,000 in the next five years.

* Results of re-examination by mass radiography. Brit. M. J. 4724:144-148, 1951.

Special Exhibit

Practical Gynecology

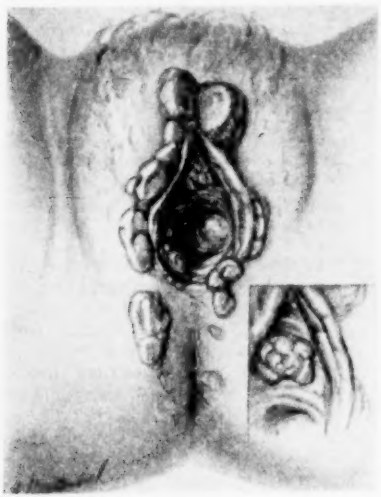
WALTER J. REICH, M.D., AND MITCHELL J. NECHTOW, M.D.

with illustrations by Angela Bartenbach
Cook County Hospital, Chicago

THE procedures pictured and described in this exhibit have been used at the Cook County Hospital Gynecologic Clinic and in teaching at the Cook County Graduate School of Medicine for many years. Because of the great number of patients, the methods and technics must be simple yet effective.

CONDYLOMA ACUMINATUM

The term papilloma or soft papilloma has often and justly been used when condyloma acuminatum (venereal wart) is found in locales other than the vulva, vagina, cervix, thigh, buttock, penis, or scrotum; that is, on the urethra, anus, or face. Certainly, the gross appearance of such growths about the urethra is better described as papillomatous than as warty, for they appear as soft, smooth, cauliflower-like, moist masses arising insidiously from the external urethral meatus.



1. These may be singular, multiple, or confluent.

2. Leukorrhea, irritation, dysuria, and dyspareunia are frequent.

3. Biopsy will establish positive diagnosis.

For treatment:

Protect the normal skin with either petroleum jelly, zinc ointment, or collodion.

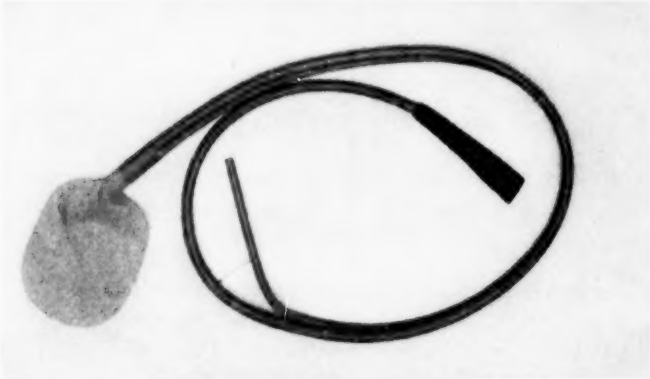
Apply 25% podophyllin ointment in a Hydrosorb base. This should remain four to 6 hours. The patient must then get into a bathtub of warm water and wash off the ointment with soap and water.

Surfacaine ointment may be used to alleviate any subsequent burning.

The soft lesions will drop off in five to seven days.

The treatment may be repeated in ten to fourteen days.

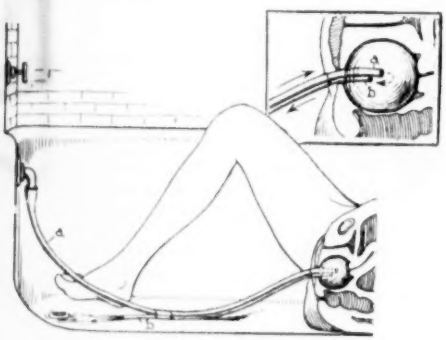
INTRAVAGINAL HEAT THERAPY



Intrapelvic hydrotherapy apparatus

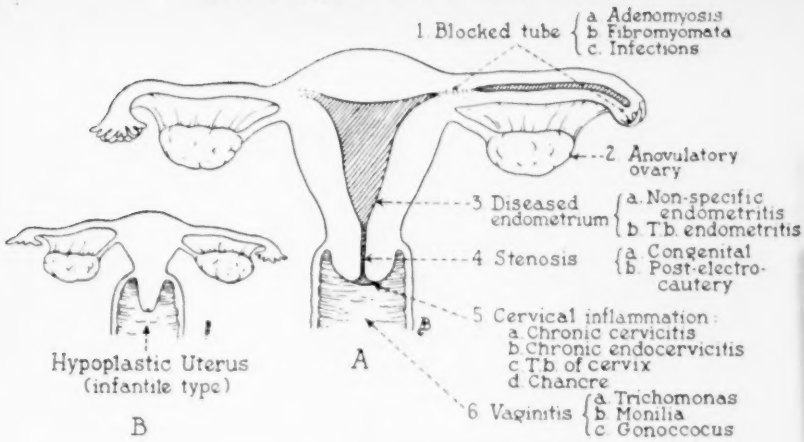
This treatment is self-administered by the patient at home or can be used by the doctor in office or clinic. A source of hot water from any ordinary faucet is all that is needed.

1. Indications
   a. Pelvic inflammatory disease
   b. Tuboovarian abscess
   c. Parametritis
   d. Pelvic cellulitis
   e. Salpingo-oophoritis
   f. Hypoplastic uterus (infantile type)
2. Physiologic Effect of Heat
   a. Changes in temperature
   b. Muscle relaxation, decreased arterial tension, increased and more rapid circulation
   c. Dilatation of peripheral vessels with subsequent decongestion of deeper vessels
3. Technic
   a. Treatment is carried out in a bathtub.
   b. A heavy turkish towel is placed on the floor of the tub.
   c. The patient assumes a lithotomy position; the bag is lubricated with a little soap or lubricating jelly and is inserted into the vagina.
   d. The rubber tube is then attached to the water faucet and the water is turned on.
   e. The patient can adjust the temperature and pressure for tolerance and comfort.
   f. The treatment is used for twenty minutes the first time, and gradually increased to sixty to ninety minutes.
   g. The treatment is taken daily.
   h. Upon completion of the treatment, the water is shut off and the bag removed.
   i. Sterilization of the bag is not necessary if used by the same patient.



Apparatus in use

LOW FERTILITY AND STERILITY



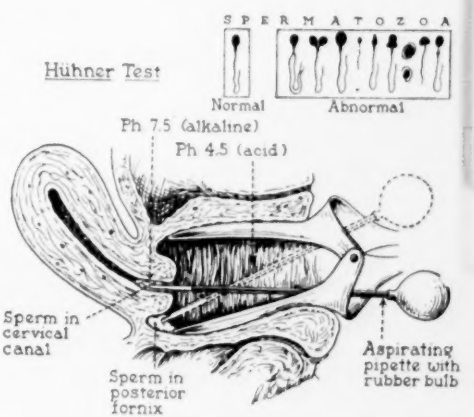
Types of pathology which may cause sterility

At the Cook County Hospital gynecologic out-patient clinic, infertility is a common problem. Many women seek the reasons and aid for barrenness. Because of the frequency of the problem, all the clinical diagnostic tests have been reduced to practical and simple forms. Procedures that are too complicated and cumbersome lose their practical value and application.

The sterility problem should be considered as a business with two equal partners, either or both of whom may be responsible for the lack of progeny. Thus, both the female and male must be checked and evaluated individually.

Technic of the Hühner test for sperm visibility and migration. Inserts show the normal and abnormal forms of spermatozoa. Aspirate and test separately the sperm in the cervical canal and the vagina. A count of 50 sperm per highpower field from the cervix is considered adequate.

Sperm count. Draw semen to 0.5 mark in a white blood cell pipet; add 0.5% Azochloramid or saturated solution of sodium bicarbonate and 1% phenol. Count 5 large or 80 small squares, as for a red blood count. Add 6 zeros. This gives the number of sperm per cubic centimeter.



FEMALE

I. Objective Survey
   1. Myxedema
   2. Tuberculosis
   3. General debility
   4. Hirsutism
   5. Anxiety neurosis

II. History
   1. Gonococcic infection of tubes
   2. Nonspecific pelvic inflammatory disease
   3. Mumps with possible oophoritis
   4. Tuberculosis
   5. Appendicitis
   6. Previous laparotomy
   7. Infertility in previous marriages
   8. Nonprotein eater
   9. Prolonged food deprivation
   10. Repeated abortions
   11. X-ray technician
   12. Irregular bleeding with dysmenorrhea
   13. Narcotic addiction

III. General physical examination must be complete and thorough

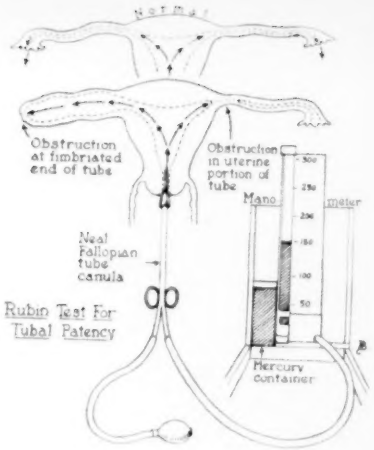
IV. Local Examination
   1. Vaginal and cervical *p*H (normal 4 to 4.5; 7 to 7.5)
   2. Cervix: entropions, endocervicitis, polyps, prolapsing fibroids, strictures
   3. Uterus: size, shape, consistency, position
   4. Adnexal areas: thickening, fixity

V. Special Tests
   1. Tubal insufflation
   2. Endometrial biopsy
   3. Sperm migration (Hühner's test)
   4. Temperature graphs

VI. Laboratory Tests
   1. Complete blood count
   2. Kahn
   3. Rh
   4. Basal metabolic rate
   5. Urinalysis
   6. Sedimentation rate for occult infections
   7. Cervical and urethral smears
   8. Chest roentgenogram for tuberculosis

VII. Treatment

Therapy will vary with etiology.
   1. Pelvic inflammatory disease: heat and penicillin
   2. Chronic cervicitis: electrocautery



Technic of the Rubin tubal patency test. Upper drawing shows obstruction of the tubes. When the air passes through, the tubes are open and the results are positive. If obstruction exists, results are negative. Carbon dioxide was formerly employed for this test, but now air is used, and with no ill effects.

   3. Vaginitis: bacteriostatic agents, acidifying douches
   4. Hypoplastic uterus: heat, estrogens
   5. Retroversion: pessary
   6. Endocrines
   7. Vaginismus: dilatation, psychotherapy or perineotomy
   8. Asthenic indoor patient: wholesome outdoor physical hygiene

MALE

I. Objective Survey
   1. Scanty beard
   2. Marked adiposity
   3. Neurasthenia
   4. Tuberculosis
   5. Anxiety neurosis
   6. Disproportionate height spans between legs and body

II. History
   1. Mumps with secondary orchitis
   2. Gonococcic infection

3. Tuberculosis, brucellosis
4. Improper sexual technic
5. Excessive sexual indulgence
6. Impotence
7. Premature ejaculations
8. Undescended testes
9. Nonprotein eater
10. Urethral strictures
11. Hernia surgery
12. X-ray technician
13. Drug addiction
14. Lead poisoning

III. General physical examination must be complete and thorough

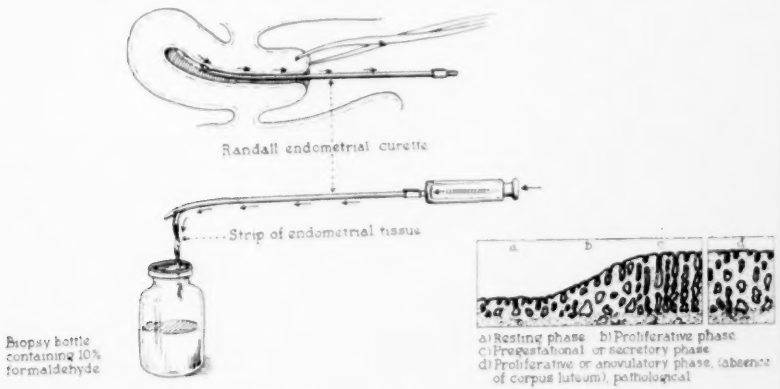
IV. Local Examination
1. Penis: hypospadias, epispadias
2. Urethra: strictures
3. Prostate and seminal vesicles: residual inflammatory processes
4. Ejaculatory ducts: strictures
5. Epididymis: thickened by gonococcal infection, tuberculosis, or nonspecific inflammations
6. Testes: absent, atrophied, or undescended

V. Special Tests
1. Semen analysis: sperm motility, sperm count, sperm morphology
2. Testicular biopsy, if indicated

VI. Laboratory Tests
1. Complete blood count
2. Kahn
3. Rh
4. Basal metabolic rate
5. Prostatic smear
6. Urinalysis
7. Chest roentgenogram for tuberculosis
8. Sedimentation rate for occult infections

VII. Treatment

Sufficient rest, open air exercises, and adequate, balanced diet
1. Impotence and premature ejaculations: psychotherapy
2. Prostatitis and seminal vesiculitis: massage, heat, antibiotics
3. Urethral strictures: gradual dilatations
4. Hypothyroidism: thyroid extract to maintain a basal metabolic rate of plus 10
5. Azospermia, present on three different occasions: testicular biopsy
6. Oligospermia: thyroid and Synapoidin
7. Obstructive bilateral epididymitis: vasoepididymostomy



Technic of endometrial biopsy. This may be done in the office with complete safety. Use sterile instruments. Expose and grasp the cervix transversely on the upper lip. Do not pull. *Place the curet in the uterine cavity. Do not forcibly push the curet. Avoid perforation of the uterus. While withdrawing the curet, scrape against the endometrium. Take 2 or 3 samples in different sites. Place specimen in a fixative.*

(A) Some of the more common types of pathology which may cause sterility. (B) Hypoplastic uterus (infantile type).

TRICHOMONAS VAGINITIS

Trichomonas vaginitis is found in all age groups—in children and young girls, during the childbearing period, and during and after the menopause. *Trichomonas vaginitis* frequently occurs in pregnancy and may be found after either abdominal or vaginal operations.

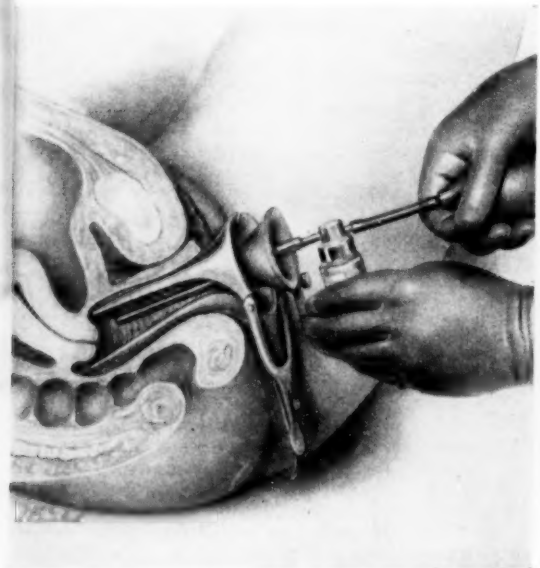
1. A common cause of leukorrhea
2. Symptoms
   a. Discharge
   b. Burning
   c. Itching
   d. Dysmenorrhea
3. Diagnosis: Inspection reveals a bubbly, yellowish discharge. To a drop of saline or plain tap water, add a small amount of the discharge. Mix and place on a slide (a hanging drop may also be used). Low and high dry magnification will show the motile trichomonads and their flagellae.
4. Treatment must be continuous and diligent. Pregnancy is no contraindication to treatment.

A. In the office

1. Wash the vagina and vulva with liquid germicidal detergent, 1 part to 3 of warm water
2. Dry the vagina and vulva
3. Insufflate with speculum open
4. We use Argypulvis powder: 20% powdered Argyrol, 40% beta-lactose, 40% Kaolin
5. Give patient a sanitary napkin

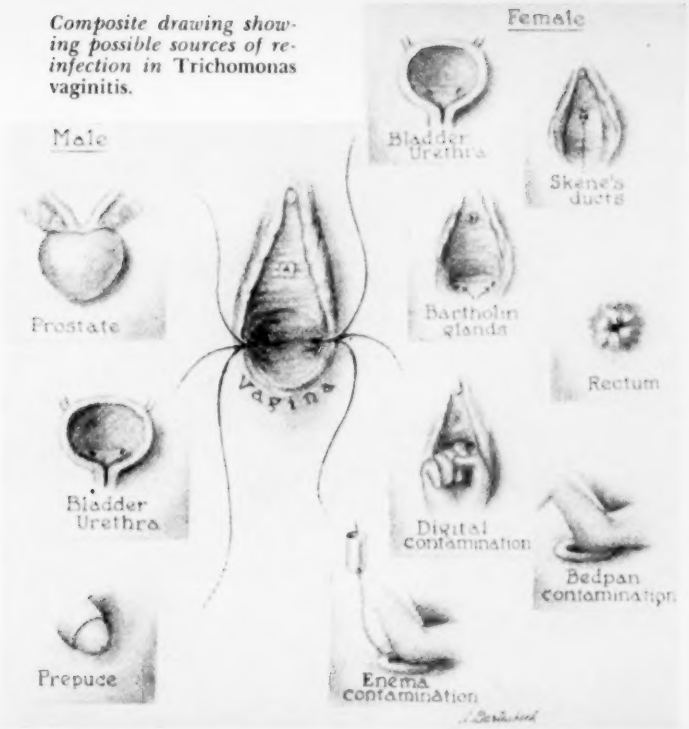
B. For home use

1. Acidifying douches: 2 tbs. of white vinegar to 2 qt. of warm water; or lactic acid douches, 2 tsp. to 2 qt. of warm water
2. Argypulvis capsules. Patient inserts 1 capsule nightly after the douche. Before insertion, the capsule should be perforated three times at each end with a pin and dipped into hot water to facilitate dissolving of capsule and spread of contents.
3. Usually four to six weeks are required to arrest the condition. Four negative smears at weekly intervals indicate a cure.



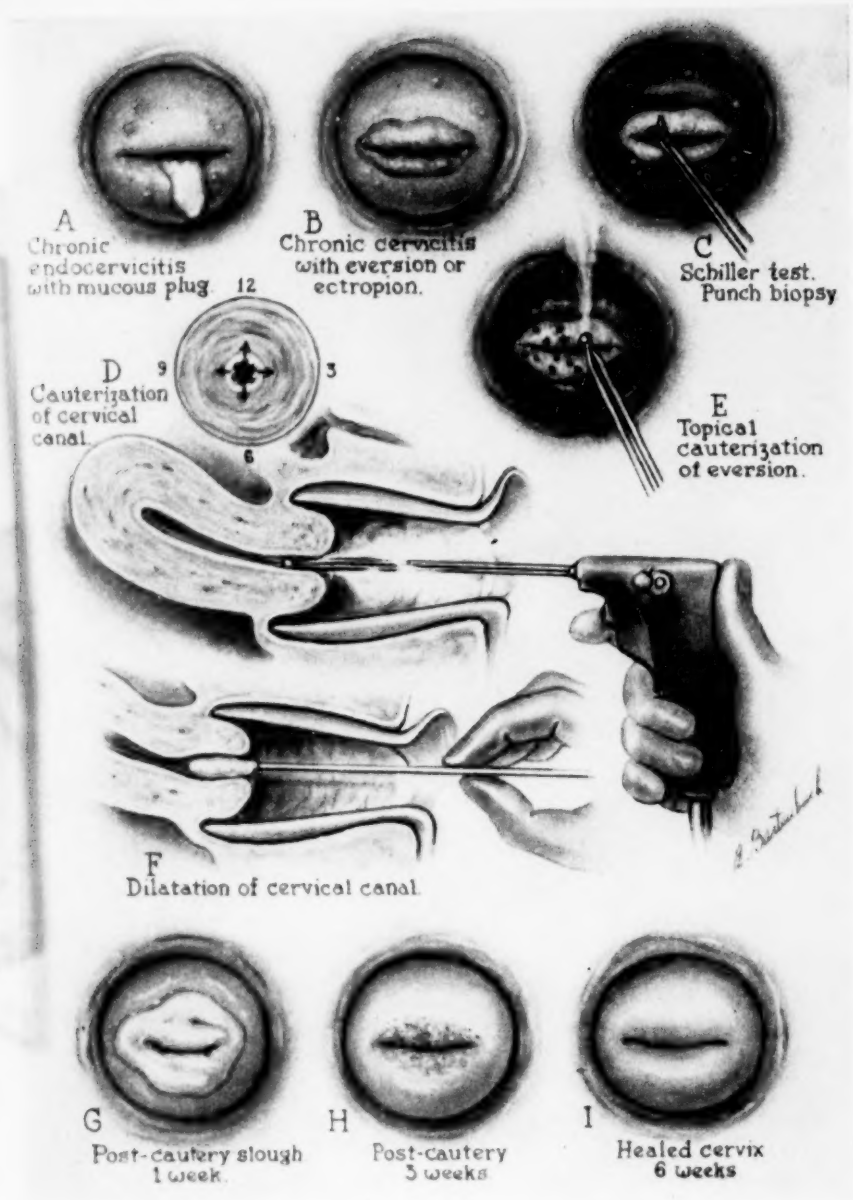
Showing insufflation of silver proteinate compound powder (Argypulvis). Note the open speculum in the vagina. This is used to decrease air pressure and to avoid possible air embolism. Insufflate around the cervical os, but not into it.

Composite drawing showing possible sources of reinfection in Trichomonas vaginitis.



(Left) *Placing of the aspirated vaginal material on the slide.*

(Right) *Addition of normal saline or warm water to dilute the discharge. Mix. If the mixture is too thick, it will not be diagnostic.*


A
Chronic endocervicitis with mucous plug
B
Chronic cervicitis with eversion or ectropion.
C
Schiller test. Punch biopsy
D
Cauterization of cervical canal.
12
9
3
6
E
Topical cauterization of eversion.
F
Dilatation of cervical canal.
G
Post-cautery slough 1 week.
H
Post-cautery 3 weeks
I
Healed cervix 6 weeks

ELECTROCAUTERY FOR CHRONIC CERVICITIS

Chronic cervicitis is probably one of the most common gynecologic lesions which affects the uterine cervix and the female genitalia. Yet in spite of its frequency, the condition is often neglected by the physician.

1. Be sure it is benign!
2. Do a cytologic smear and biopsy or both.
3. The best time for cauterization is about seven to ten days after cessation of menstruation. Premenstrual cauterization may cause excessive bleeding.
4. Do not cauterize in the presence of acute or subacute pelvic inflammatory disease. This may cause peritonitis.
5. Eversions, ectropions, and erosions begin in the endocervix. The epithelium rolls out from the inside of the canal and is deposited on the vaginal part of the cervix as a beefy red lesion.
6. The technic consists of
   a. Endocervical cauterization
   b. Cauterization of the ectropion
7. The heat of the cautery tip should be a dull cherry red. Anesthesia is not necessary.
8. Do not cauterize too deeply; fibrosis, strictures, pyometra, hematometra, or leukometra may result.
9. Instruct patient to return weekly for dilatation of the cervical canal.
10. No douching and no sexual congress are permitted for seven to ten days after cauterization.
11. Warn patient that a profuse discharge follows cauterization.
12. Complete epithelization takes ten to twelve weeks.

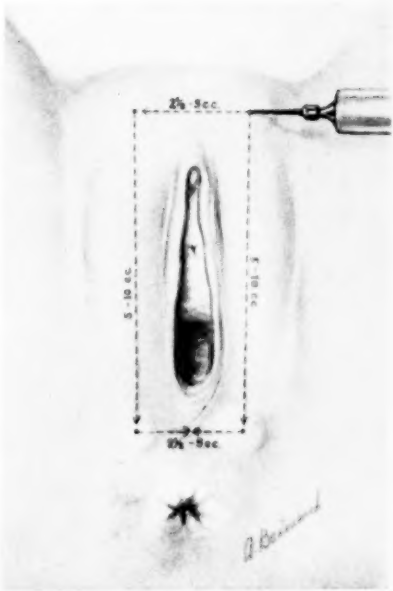
(Opposite page) *Composite drawing showing cervical pathology, Schiller test, punch biopsy, cauterization of the cervix, dilatation of the cervix, and the healing process. Some cervixes with extensive ectropions require ten to twelve weeks for complete epithelization.*

Simple electrocautery machine and electrodes

INTRACTABLE PRURITUS VULVAE

This condition is one for which no cause is demonstrable, yet patients have severe itching, usually of many years' duration. The history often shows that the patients have been to dermatologists, endocrinologists, and radiologists and many times have been given ointments, paints, medicine of all types, and irradiation. In spite of all these therapeutic procedures, the itching persists.

1. No demonstrable etiology
2. Itching is severe and of long standing.
3. Ages range from twenty-eight to seventy years.
4. In our series, some of the cases had this itching as long as eighteen to twenty years.
5. The exact physiology is not understood. However, it is quite probable that the sensory nerve endings are affected by some sclerotic process which exposes them and makes them vulnerable to the slightest stimulation.
6. Use of ointments, paints, and other medicaments has proved ineffective. Most of our patients have "made the rounds" without success.
7. Treatment consists of injection of Zylcaine into the labia
8. Technic of treatment
   a. Procedure is carried out in the office. The patient may be hospitalized if she desires.
   b. The vulva is washed with soap or liquid detergent. The pubic hair is *not* shaved.
   c. Four procaine (1%) wheals are made at each of the quadrants of the vulva by hypodermic needle and syringe.
   d. The procaine (1%) is injected into the entire labia to decrease pain.
   e. A 20-cc. syringe is filled with slightly warmed Zylcaine. Use 19- or 20-gauge spinal needle.
   f. Introduce the needle through the procaine wheal and into the entire length of the labia majora and minora to the perineal body. Inject the oil as you withdraw the needle to avoid injecting it into the blood stream.
   g. The injection is made fairly deep into the fatty tissue of the labia to avoid sludging.
   h. Use 10 cc. on each labia majora and 5 cc. across the clitoris and rectovaginal septum.
9. No disability or reaction follows the injection.
10. Effects will vary. Relief may be immediate or may take several days to four to six weeks.
11. If a repeat injection is necessary, wait three months.
12. Local allergic reactions (oil) occurred twice in our series of 165 cases.

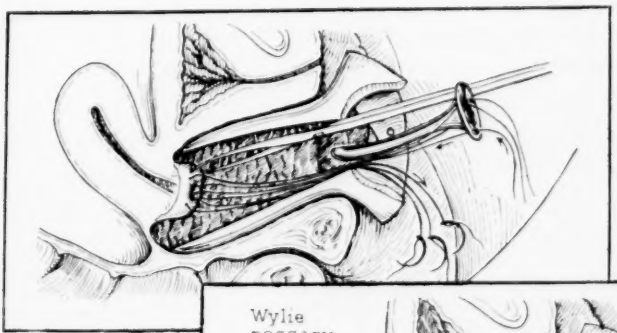


Injection of procaine and Zylcaine into labia majora and minora

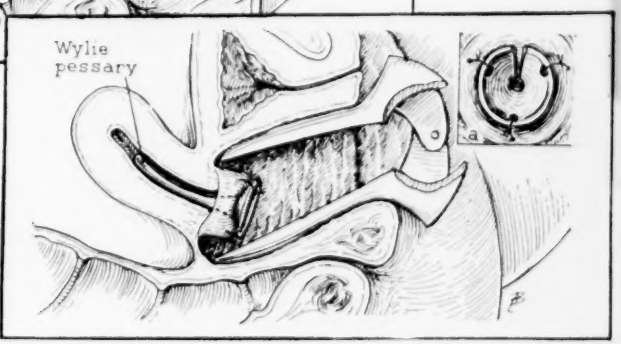
PRIMARY DYSMENORRHEA

1. In primary or essential dysmenorrhea, the etiology is not apparent.
2. The pain is usually severe, incapacitating the patient from one to two days each month.
3. Medicaments used are only for symptomatic relief.
4. The Wylie intracervical pessary keeps the cervix dilated and probably interferes with sympathetic nerve fibers
5. Technic of insertion:
   a. Give Sodium Pentothal anesthesia.
   b. Expose cervix with speculum.
   c. Grasp the cervix transversely with a tenaculum.
   d. The base of the pessary must have three holes spaced at 10, 2, and 6 o'clock.
   e. Thread pessary with black silk.
   f. Dilate the cervix.
   g. Insert the pessary and sew it into the cervix.
   h. Tie the silk loosely. Permit the pessary to be free in the cervical canal. Tight sutures will tear through and the pessary will fall out.
   i. The pessary is worn for three months. However, it should be checked monthly.
   j. Intercourse and douching are *not* contraindicated.

Our particular experience with the Wylie pessary has been unassociated with any infection. It can be inserted with the use of Pentothal intravenously, or by local infiltration of the anesthetic into the bases of the broad ligament. The patient's sex life, menstruation, and hygiene are not impaired by the therapy. The patient returns to the office every three or four weeks and is examined both bimanually and with a speculum. She is told to report any symptoms of pain or unusual bleeding.



The Wylie pessary. Insertion: Pessary is grasped by uterine forceps and inserted into uterus. Suture ends left long.



The Wylie pessary completely inserted. Sutures tied and cut. Leave about ¼ to ½ in. of "play" or looseness between the pessary base and the cervix. Cut the silk long—1½ to 2 in.—so removal will be easy.

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Allergic Epilepsy

SUSAN C. DEES, M.D., AND HANS LOWENBACH, M.D.*
Duke University, Durham, N.C.

ELECTROENCEPHALOGRAMS of a few children with convulsions and allergy do not show the spike-and-wave or fast wave pattern often found with idiopathic convulsive disorders, but have the pattern of occipital dysrhythmia, also seen with uncomplicated allergy.

Susan C. Dees, M.D., and Hans Lowenbach, M.D., report that such children, having failed to benefit from anticonvulsant drugs alone, are often helped by therapy for the allergic disorder.

Sensitivity and electroencephalographic studies were made of 37 children under 14 years of age who had convulsive disorders of grand and petit mal type and who also had evidence of allergy. Nearly all the children had family histories of allergy. Of the 37 children, 22 had frank allergy, and the other 15 had features suggestive of or compatible with allergy.

With the allergic patients the incidence of asthma, eczema, and rhinitis was high. Multiple skin sensitivity was noted in the allergic patients, and food-skin sensitivity among those possibly allergic. Nearly one-half of the presumably nonallergic children reacted to air-borne allergens.

Eosinophilia was present at some time in all the allergic children and in 50% of the nonallergic. Stool specimens were negative for parasites. No demonstrable organic brain disease was found in any case, and results of serologic tests for syphilis were negative for all.

Electroencephalograms showed occipital dysrhythmia for 15 of the 22 allergic children. This abnormality was combined with spike-and-wave patterns for 5 patients; 1 child also had focal changes. Of the 15 children without demonstrable allergy, 4 had normal records; occipital dysrhythmia was noted in 11 cases, combined with frontal dysrhythmia in 4, and the spike-and-wave pattern in 2.

Treatment consisted of antiallergic measures including desensitization, elimination diets, and precautions against the environmental allergens. Drug therapy for allergic symptoms and anticonvulsants were used as indicated. Sedatives were never deliberately discontinued until patients had been asymptomatic for longer than their longest previous remission.

The convulsive disorder was controlled for 24 of the 37 children receiving antiallergic and symptomatic therapy. Of these, 18 were allergic; 6 were without frank allergy.

The case histories of 4 children show that allergy control was accompanied by clinical and electroencephalographic improvement. After the regimen was stopped, convulsions and allergic symptoms recurred.

* Allergic epilepsy. Ann. Allergy 9:446-458, 1951.

Heroin Addiction Among Adolescent Boys

PAUL ZIMMERING, M.D., JAMES TOOLAN, M.D., RENATE SAFRIN, AND S. BERNARD WORTIS, M.D.*

New York University, New York City

MANY boys try heroin without becoming addicts. Addiction is determined more by the psychologic structure of the user than by the chemical effects of the drug.

Those who form the habit, though not actually psychoneurotics, seem to have certain constant, well-defined personality weaknesses. They are usually soft spoken, verbally adept, and nonaggressive but socially adaptable. They are strongly attached to their mothers but have weak relationships with others.

They have a need for experiencing a feeling of omnipotence. When frustrated they have a tendency to regress to infantile levels of adjustment.

Because of the recent widespread use of heroin by New York City boys, Paul Zimmering, M.D., James Toolan, M.D., Renate Safrin, and S. Bernard Wortis, M.D., studied 22 adolescent addicts. The following conclusions were drawn:

The intellectual levels of young addicts range from borderline to high. The mean classification—dull normal intelligence—is roughly the same as for a comparable group of nonaddict delinquents on the ward. Uniformly, underlying conflicts interfere with intellectual function. Application is poor and learning difficult. Poor performance on standard educational tests, coupled with a narrowing of the interest span, is common.

In emotional reactions, the boys are generally immature and labile. Pressure or emotional stimuli are likely to evoke anxiety. Since the boys cannot assert themselves, they cling to others, especially their mothers, for support. Frustration tolerance is low.

Addicts lack adequate means of expressing their impulses. Anxiety-arousing situations are not met with open and impulsive aggression, but by withdrawal and resort to fantasy. Simultaneously, they may regress to more infantile levels of adjustment and manners of expression.

Ego development is weak. The addicts attempt to compensate for strong feelings of inferiority and inadequacy by fantasies of strength and power. The Negro patients studied had all suffered psychologically from feelings of racial discrimination and inferiority.

Interpersonal relationships are disturbed and an adequate social adjustment is precluded. Fear of the environment, with concealed antisocial and hostile feelings, a sense of insecurity and inadequacy, and a need for support create almost insuperable problems. All this results in a mask behavior, which is ex-

* Heroin addiction in adolescent boys. J. Nerv. & Ment. Dis. 114:19-34, 1951.

pressed by a superficial ease in manipulating social situations.

Addiction in adolescents is accompanied by sexual anxiety and maladjustment. Homosexual tendencies and experiences are more frequent among addicts than among other similar age groups.

Heroin use is growing rapidly and should be combatted by an active educational campaign to impress adolescents with the danger of the addiction. Also, strenuous enforcement against narcotic distribution is essential.

Management of the adolescent drug addict is basically a socio-psychologic and police problem. Existing institutions which are equipped to deal with the usual types of behavior disorders among adolescents should be used as rehabilitation centers. Special institutions are unnecessary.

Medical treatment, required during the withdrawal period, can be handled at screening clinics or hospitals. The patients should be placed away from home for two or three years, with periodic trials at home to test their ability to do without the drug.

Nisentil Analgesia for Childbirth

HARRY G. LA FORGE, M.D.*

THE recently synthetized analgesic, Nisentil hydrochloride, rapidly alleviates obstetric pain, produces no deleterious effects in the mother, and causes only a temporary depression of the infant's breathing.

Nisentil, originally termed Nu-1196, is chemically related to Demerol. In a series of 1,000 cases, Harry G. LaForge, M.D., of the University of Buffalo, N.Y., found that injections can be given safely at any time in every kind of labor.

When cervical dilatation is 2 to 10 cm., from 40 to 80 mg., according to weight, is injected subcutaneously. About 1 of 5 women require additional amounts, ranging up to 5 doses totaling 360 mg.

Scopolamine is sometimes given concurrently, in doses of 1/100 to 1/300 gr. Low spinal anesthesia or chloroform is employed as the terminal anesthetic. With the former, depressant effect on the baby's respiration is slight.

Effects of Nisentil are evident in about five minutes and continue one and a half to two hours. A feeling of confidence and well-being results, maternal cooperation is excellent, and labor is shorter than with other agents.

Untoward effects on the mother are rare and consist chiefly of slight dizziness or sweating.

* Nisentil in 1,000 obstetric cases. New York State J. Med. 51:1835-1838, 1951.

Obstetric Management in Diabetes

ROBERT M. GRIER, M.D., AND ALVAH L. NEWCOMB, M.D.*
Northwestern University, Chicago

THROUGHOUT pregnancy, control of maternal diabetes is mandatory.

Occasionally the pregnancy should be terminated early, since many diabetic mothers are prone to have severe preeclamptic toxemia and the infants often die in utero during the last month. The method of termination depends on the parity, the length of gestation, and the position of the fetus.

For a primipara two or three weeks before term with a closed and uneffaced cervix and floating fetal head, cesarean section is probably an advisable procedure.

If the head is well into the pelvis and the cervix is somewhat dilated and effaced, induction of labor by rupture of the membranes may be successful, especially for multiparas. Labor should not be prolonged nor be permitted to upset the control of the mother's diabetes excessively.

The infant should not be too premature. Unless the patient has toxemia, a large fetus, or polyhydramnios, pregnancy should not be ended earlier than the thirty-eighth week. In the excepted cases, the thirty-sixth week may be advisable for termination.

Spinal anesthesia with no more premedication than a small dose of scopolamine or atropine is advisable, find Robert M. Grier, M.D., and Alvah L. Newcomb, M.D. Barbiturates should be avoided.

The newborn infant is usually large, edematous, and icteric, especially if the mother's diabetic condition is long-standing. Respiratory embarrassment, instability of blood sugar, and erythroblastosis are also frequently encountered.

Since the stomach contents of the infants of diabetic mothers immediately after delivery are much greater than normal, immediate gastric aspiration through the oropharynx with a No. 10 French catheter should be done to prevent respiratory complications. Suction is applied two or three times and oxygen is administered between suctions. The infant is placed in an incubator receiving oxygen at 6 liters per minute for three or four days.

With infants born by cesarean section, the umbilical cord should not be clamped until the end vessels have collapsed and the placenta has presumably drained, thereby providing up to 90 cc. more blood.

The infant may require glucose feedings if the maternal diabetes has been poorly controlled. Under these circumstances the fetal pancreas may hypertrophy and produce excessive insulin for the needs of the infant, leading to hypoglycemic reactions, convulsions, and death.

* The management of pregnancy and the newborn infant of diabetic mothers. Quart. Bull., Northwestern Univ. M. School 25:268-269, 1951.

Nerve Block in General Practice

JOHN S. LUNDY, M.D.*
Mayo Clinic, Rochester, Minn.

THE family physician may find nerve block of value in determining the source of obscure pain or in giving relief when the cause is known but incurable.

Distress may be so favorably affected as to warrant nerve section. John S. Lundy, M.D., uses nerve block with good results in cases of arthritis of the hip, the arm-hand syndrome, and pancreatic disease. Gastrointestinal and biliary symptoms are less amenable.

When block is used as a diagnostic procedure, the patient is warned that benefit will be only temporary. He is questioned about the nature, site, and duration of pain, aggravating factors, length of remissions without treatment, and use of narcotics. An addict usually says that he feels worse after anesthesia.

Psychiatric consultation may improve the mental state before injection, and in turn elimination of discomfort sometimes modifies psychosis.

Both the suspected nerves and one or two above and below should be blocked. The exact position of needles is determined by radiography. As the needle or needles are placed and one nerve after another is affected, the subject reports whether the original complaint is reproduced or not.

Injection under pressure may elicit familiar symptoms. When anesthesia develops, motions are made and positions assumed that commonly evoke pain.

Sensations are again described, and if relief is uncertain, doubts may be resolved by return of the pain after the drug has worn off. During or after anesthesia the sufferer decides whether permanent numbness following nerve section would be objectionable.

Therapeutic nerve block must be done with even greater precision than the diagnostic procedure. Alcohol or 6% phenol in water is injected at the rate of 0.5 cc. every ten seconds in the same spot to a total of 2 to 5 cc.

Less hazardous drugs may be used in cases with spontaneous lapses of pain for a day or more. In blocking the ilioinguinal and iliohypogastric nerves near the anterosuperior iliac spine, as much as 10 cc. of 1% solution of procaine hydrochloride may be introduced without epinephrine. When the typical sensation is felt, up to 10 cc. of 5% ammonium sulfate solution is added through the same needle.

In other instances injection of dolamine, which contains 0.75% each of ammonium sulfate and benzyl alcohol, may be effective for days, weeks, or rarely for months.

Hip pain from osteoarthritis may be relieved by deadening the anterior

* Diagnostic and therapeutic nerve block in general practice. Northwest Med. 50:577-582, 1951.

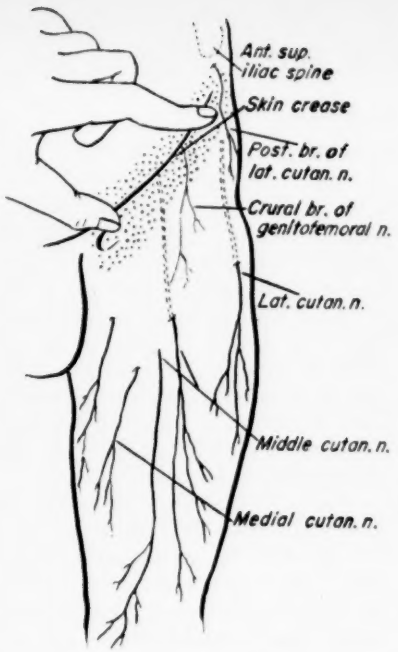


Fig. 1. Line of infiltration for blocking anterior femoral cutaneous nerves

femoral cutaneous nerves of the thigh (Fig. 1). The area is infiltrated with 30 cc. of a 1% solution of procaine hydrochloride and epinephrine.

Even after section of the anterior and lateral femoral nerves, blockade and later division of the posterior femoral cutaneous nerve may be well worth while for additional pain relief. From 10 to 20 cc. of procaine solution is used (Fig. 2).

After an accident such as loss of a finger, the arm-hand syndrome may be completely disabling. Alcohol block of the stellate ganglion at the first thoracic vertebra can alleviate symptoms for months and permit curative physical therapy.

Pancreatic symptoms from inoperable carcinoma, stones, or acute relapsing inflammation are often greatly lessened by anesthesia. The diagnosis is generally made by an exploratory operation.

Needles are placed against the middle of the body of the first lumbar vertebra, and 10 to 20 cc. of dolamine is injected on each side. If a local anesthetic is effective for two or three hours or if dolamine brings relief for two or three days, alcohol may be injected for chemical sympathectomy or nerves may be severed on one or both sides.

When nerves are cut, silver clips are placed on the ends of the sectioned nerves, and roentgenograms are made for later reference.

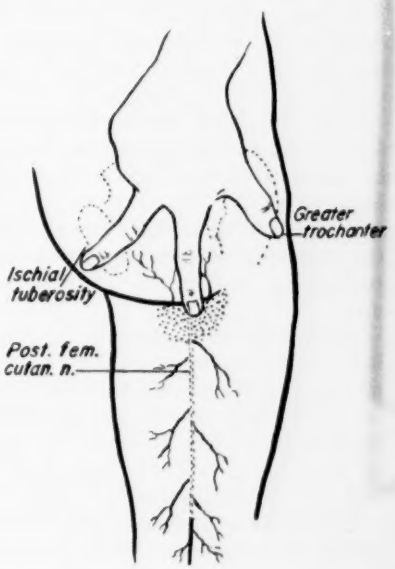


Fig. 2. Landmarks for injecting posterior femoral cutaneous nerve

Steroid Hormones and Aging

JOHN ESBEN KIRK, M.D.*
Washington University, St. Louis

ATROPHIC age changes once considered permanent may be reversed by judicious use of androgens, estrogens, and adrenal corticoids. Testosterone may increase muscular strength, relieve mental depression, and improve sexual function. Female hormones rejuvenate the skin and nasal membranes as well as the uterus and vagina.

Usual life expectancy is not prolonged by hormone therapy. Not all senile tissues are affected and, with cardiovascular complications, endocrines may precipitate a cerebral or cardiac accident. Hormone treatment is sometimes useless because aged organs cannot respond.

Yet the general results are hopeful, implying that other agents may be found to restore regions now unimproved.

John Esben Kirk, M.D., summarizes the influence of age on hormone production and effects of replacement.

Production of androgens in the body is shown by colorometric determination of neutral 17-ketosteroids in urine. Male values gradually fall from about 15 mg. daily at the age of 30 years to about 4 mg. at 90, and in women from 10 to 2 mg.

Estrogenic steroids are excreted by young and old men at practically the same rate, 12 rat units in twenty-four hours. Women produce from 38 to 39 units daily in the reproductive period, 21 units between 40 and 49 years, 11 units from 50 to 59, and about 7 units thereafter.

The abrupt decrease in female estrogen is related to ovarian involution. Androgens are reduced in elderly men probably because of regression in testicular interstitial tissue. In both sexes, the pituitary secretes more gonadotropin than in youth.

The androgen-estrogen ratio of men drops from 10.9 before 40 years to 2.6 after 80, consequently sensitive tissues are affected and both prostatic hypertrophy and gynecomastia may result.

Primary deterioration of various organs as well as hormone deficit may be responsible for male or female symptoms of fatigue, dejection, reduced sexual activity, hot flashes, and nervousness.

Measured by eosinopenia, ability of the adrenal cortex to secrete 11-17 oxysteroids after ACTH stimulation is not greatly impaired in later years. Response of the pituitary to acute epinephrine stress is moderately reduced, however, although long-term pituitary output is not much lessened.

Treatment with steroid hormones affects both reproductive and nongenerative organs. Old men receiving testosterone occasionally have increased sexual potency, partly be-

* Steroid hormones and aging: a review. J. Gerontol. 6:255-262, 1951.

cause atrophic penile muscles are strengthened. Nitrogen retention and protein synthesis increase, and subjects over 70 years old may gain 8 or 10 lb. in four to eight weeks, though effects do not persist long after therapy is stopped.

Estrogen-induced changes in women after the age of 60 are of particular interest. Even in senile subjects, 1 to 3 mg. injected weekly, at intervals or with progesterone, causes cyclic bleeding. Vaginal and uterine tissue regenerates, breasts enlarge, memory and motivation improve.

The low, nonciliated nasal epithelium of old age changes to the earlier ciliated type, while secretory glands and blood vessels multiply.

The skin may be rejuvenated by an ointment containing 1 mg. of estradiol per ounce applied for six weeks. More superficial layers, epidermal pegs, capillaries, and elastic fibrils are seen.

In both men and women of advanced age, epidermal growth is stimulated by alpha and beta estradiol, estrone, testosterone, and methyl-androstenediol, though estrogens are more effective.

When 1 mg. of estradiol benzoate in oil is massaged into an area of skin containing 40 sq. cm. every second day for two months, elasticity returns as if age were reduced fifteen years.

Osteoblastic activity is quickened by estrogens and androgens, an effect significant for senile osteoporosis.

¶ CARDIOVASCULAR SYPHILIS is safely managed with penicillin, whether or not iodide or bismuth has been given in the past. No Herxheimer reaction or therapeutic paradox developed during therapy of 21 previously untreated patients at the University of Michigan, Ann Arbor. On reviewing the literature, Clayton E. Wheeler, M.D., and Arthur C. Curtis, M.D., noted only 8 instances of supposed adverse effects, and the connection with penicillin was not proved. No harm resulted for 190 other reported patients, approximately 25 of whom had not received previous metal or iodide therapy.

Am. J. Syph., Gonor. & Ven. Dis. 35:319-328, 1951.

¶ VENEREAL LYMPHOGRANULOMA may predispose to cancerous growth, especially if infection persists for some time. Neoplasms should be sought and removed while still on the surface, where metastasis is unlikely. Frei tests revealed the venereal condition in 31 of 49 persons with malignant disease of the genital regions. Edgar R. Pund, M.D., and George R. Lacy, Jr., M.D., of the Medical College of Georgia, Augusta, noted positive reactions with 18 of 25 carcinomas of the penis, 8 of 19 in the vulva, and all 5 anorectal tumors.

Am. Surgeon 17:711-718, 1951.

Therapy of Eye Disease in Children

RICHARD C. GAMBLE, M.D.*

St. Luke's and Children's Memorial hospitals, Chicago

SULFONAMIDES, antibiotics, ACTH, and cortisone have brought a great many changes in the management of children's ophthalmologic problems.

Recent approach to therapy of eye injuries, infection, glaucoma, and retrolental fibroplasia in childhood is explained by Richard C. Gamble, M.D.

The sulfonamides are exceptionally well tolerated by children and penetrate ocular tissues with ease. Antibiotics are most useful when applied locally for surface infection such as conjunctivitis, blepharitis, corneal ulcer, and conditions resulting from wounds.

Penicillin, though effective, may produce both local and general allergic reactions. A few days of treatment often cause conjunctivitis and dermatitis and, in later life, intramuscular therapy of more serious disease may induce systemic reactions.

Bacitracin is a better choice for treatment of minor conditions, since topical doses are equally potent and the intramuscular route is not used. Aureomycin applied locally is seldom allergenic, and either external or internal Chloromycetin therapy is safe.

ACTH and cortisone are unique in stopping inflammation at once, whereas other agents destroy bacteria and leave nature to clear up the wreckage. Moreover, cortisone drops affect the anterior half of the globe as favorably as systemic injections, require no hospital care, and cause no undesirable reactions.

For local use, 1 cc. of Cortone Acetate containing 25 mg. of hormone is mixed with 4 cc. of physiologic saline solution, and 1 drop is instilled every two hours.

Optic neuritis, choroiditis, retinitis, and other posterior processes must have general therapy. When cortisone is given, the course should end with a little ACTH, to counteract depression of the adrenal gland.

If *foreign bodies* lodge in the cornea, the eyeball is irrigated with boric acid solution, and several drops of 2% Butyn Sulfate or 1% Pontocaine are instilled. Embedded material and any surrounding stain are removed with a spud. Ointment with 500 units of bacitracin or 1 mg. of aureomycin per gram is applied, and a patch is left in place for six to twelve hours.

Eyelid lacerations are closed with dermal or black silk sutures. However, wounds involving the lid edge or lacrimal passage should be repaired by an eye specialist.

A torn conjunctiva is not sutured unless damage is extensive. Corneal lesions are managed with bacitracin or aureomycin ointment, 1% atro-

* Management of ophthalmologic problems in children. Postgrad. Med. 10:65-67, 1951.

pine, and a patch. For serious infection, sulfonamides and an antibiotic are given internally and cortisone drops locally.

Perforating injuries of the eyeball are always grave. A prolapsed iris should be excised and extensive lacerations sutured or covered by a conjunctival flap. Local and systemic sulfonamides, antibiotics, and cortisone may be necessary, as well as a booster shot of tetanus antitoxin.

If the lens capsule is damaged, a cataract may form and absorb in young children, but in some cases absorption is incomplete and a needling operation is eventually indicated.

A *sty* is covered with aureomycin salve and allowed to break open spontaneously, if the child is timid.

Traumatic *corneal ulcer* yields to sulfonamide and antibiotics, herpetic lesions to aureomycin ointment and cortisone drops, phlyctenular ulcers to local cortisone and general antituberculosis measures.

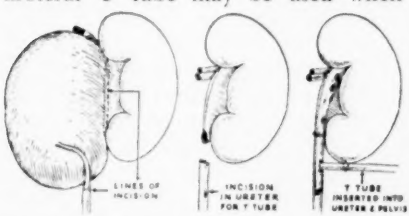
Iritis of Still's disease is generally severe and frequently results in cataract. Atropine and local cortisone or, in the worst cases, internal ACTH or cortisone is given.

Sympathetic ophthalmia may be prevented by proper therapy of the eye originally affected. The injured eye should be enucleated if totally blind. When ophthalmia develops on the other side, cortisone or ACTH may be effective.

Congenital glaucoma is recognized by an enlarged eyeball, deep anterior chamber, and hazy cornea. Goniotomy is done for minor involvement and a trephine operation for advanced disease. Drugs are practically useless.

Retrolental fibroplasia of small premature babies begins in the second month after birth with dilatation of peripheral retinal veins. Fibrosis may be prevented by cortisone or ACTH, but surgical removal of a well-developed membrane is unsatisfactory.

¶ HYDRONEPHROSIS may be successfully treated by resection of the kidney pelvis and ureteropelvic junction and anastomosis of the ureter to the most dependent portion of the remaining pelvis. A ureteral T tube may be used when drainage and splinting are desired. The upper arm of the tube splints the anastomosis and prevents pooling of urine in the pelvis. The procedure is applicable to obstructions at or just below the ureteropelvic junction, when the kidney has a reasonable prospect of recovery. Renal function is maintained and discomfort relieved, report Robert R. Berneike, M.D., and Clyde L. Deming, M.D., of Yale University, New Haven, Conn.



J. Urol. 66:68-76, 1951.

Polyethylene Plastic Catheters

HATHORN P. BROWN, M.D., AND J. HARTWELL HARRISON, M.D.*
Harvard University and Peter Bent Brigham Hospital, Boston

BECAUSE of malleability, resilience, strength, and other innate physical properties, polyethylene plastic is superior in special instances to other material for ureteral and urethral catheters.

Polyethylene is inert and thus causes only slight tissue reaction. The water-repellent and nonclotting properties and the unusually wide lumen of the plastic catheter decrease tendencies to obstruction by blood clot, exudate, or urinary salts. The material is pliable and thus conforms perfectly to the ureteral contours.

Hathorn P. Brown, M.D., and J. Hartwell Harrison, M.D., believe that polyethylene catheters are effective in management of the following conditions:

Bleeding into the renal pelvis and obstruction by blood clot. Since blood is unlikely to clot in polyethylene tubes, drainage is improved and evacuation of organized clot from the pelvis is facilitated.

Obstruction of ureter by infection or stone. Good tissue tolerance, large lumen, and little likelihood of expulsion are advantageous for prolonged drainage.

Preliminary drainage of infected hydronephrosis or pyonephrosis.

Renal calculi and sulfonamide crystalluria. Dissolution of renal calculi by lavage may be expedited by use of polyethylene catheters for ingress and egress of solution M of Suby and Albright.

Postoperative drainage. Nonclotting properties and tissue tolerance make polyethylene tubing desirable in ureterostomy, pyelostomy, and nephrostomy. When a splint is needed to serve also as a drain in plastic surgery of the urinary tract, polyethylene is useful. In cystostomy, suprapubic drainage is satisfactory for months through a No. 9 polyethylene catheter, changed every three weeks. Tissue reaction is slight and obstruction by calcareous deposition is avoided.

No marking or radiopaque medium should be placed on the outside of the catheter since these destroy the inertness of the polyethylene. If a graduated woven catheter is passed inside, the markings are distinctly seen through the transparent plastic and the distance may be accurately measured. A 3.5F woven catheter can be used in the smaller sizes, and a 4F or 5F for the larger. With the woven catheter inside, the lumen of the plastic becomes radiopaque. The location of the catheter can also be seen on a roentgenogram made after injection of a small amount of radiopaque medium into the tube.

* The efficacy of plastic ureteral and urethral catheters for constant drainage. J. Urol. 66:85-93, 1951.

Medical Forum

Discussion of articles published in MODERN MEDICINE *is always welcome. Address all communications to The Editors of* MODERN MEDICINE, *84 South 10th St., Minneapolis 3, Minn.*

The Background of Coronary Disease*

Comment invited from
Arthur M. Master, M.D.
Sidney Scherlis, M.D.
Paul D. White, M.D.
Sidney Storch, M.D.
Eliot Corday, M.D.

► TO THE EDITORS: The approach to coronary disease described by Drs. Menard M. Gertler, Stanley M. Garn, Samuel A. Levine, and Paul D. White is very promising.

In regard to the diagnosis of coronary disease, I would say that, classically, the patient with this illness is a male over 40 years of age who, after effort, eating, or excitement, has substernal pain which may radiate to the back, left shoulder and arm, or neck.

However, many patients have severe coronary disease with an atypical history and negative physical examination and roentgenogram and fluoroscopy of the chest and even a negative 12-lead resting electrocardiogram. A normal electrocardiogram does not exclude coronary disease; the physician must go further.

One could be criticized justifiably if a patient with a suspicious chest pain were given a clean bill of health without a functional test. In such a situation, we use the 2-step exercise test. We believe that, when both the single and the double 2-step exercise electrocardiograms are negative, coronary disease is practically excluded and that another cause of the pain—spondylitis, arthritis, gallbladder disease, anemia, peptic ulcer, or hiatus hernia—must be sought.

On the other hand, when the standard 2-step test is positive, coronary insufficiency is present and may be organic or functional in origin. Occasionally, a positive 2-step test is observed on the basis of autonomic imbalance or emotional instability. In such a case the physician must use his clinical judgment to distinguish between functional coronary insufficiency and coronary insufficiency secondary to coronary disease.

Incidentally, although we are talking about the probable existence of coronary disease, I have digressed purposely to emphasize the importance of coronary insufficiency. It is produced when there is a disproportion between the demands of the myocardium for oxygen and the blood supply. For example, it may occur in a person with normal coronary arteries when there is sudden bleeding, because an insufficient amount of oxygen reaches the myocardium.

*MODERN MEDICINE, Sept. 15, 1951, p. 72.

Realization that coronary insufficiency is a distinct entity is an advance, in that measures can be taken to prevent and cure it. Coronary occlusion, on the other hand, cannot be prevented at present and no specific treatment for it exists.

ARTHUR M. MASTER, M.D.
New York City

► TO THE EDITORS: There are certain metabolic disorders in which an abnormally high incidence of coronary artery disease has been observed. Chief among these are diabetes, gout, xanthomatosis, and myxedema. The high blood levels of cholesterol and uric acid in these conditions have been considered responsible for the increased frequency of coronary arteriosclerosis in these patients.

Attempts have been made to determine whether, in the absence of such clinically recognized metabolic disturbances, persons with the chemical disturbances alone are more prone to develop coronary artery disease. The work of Dr. Gertler and his associates is such an attempt, and their "factor" represents their conclusion that the biochemical background of coronary artery disease is related to the cholesterol-phospholipid ratio and to the uric acid level. They also conclude that body build is more important than overweight alone.

In the clinical metabolic disturbances mentioned above, it may well be that the accompanying biochemical disturbances *do* form the background for coronary artery disease. In the patients with coronary artery disease studied by Dr. Gertler and associates it has not been shown that the disturbances in blood chemistry which they measured are the cause and not the result of the coronary artery disease. Their matched healthy group is more like the unmatched healthy group than the coronary group, suggesting that the latter possibility has not been dismissed by their evidence.

Let us, however, for the purpose of discussion, assume that Dr. Gertler's conclusions are correct. Even so, I must emphasize that in patients with the clinical metabolic disturbances mentioned, and in patients with or without the chemical abnormalities studied, the same rigid criteria for the diagnosis of coronary artery disease prevail. Even if the patient is white, elderly, male, hypertensive, and a high-powered executive, the same standards for diagnosis obtain, though one's index of suspicion may well be raised.

One should not make a diagnosis of coronary artery disease unless there is clinical or laboratory evidence of inadequacy of the coronary circulation. In fact, since aging or sclerosis occurs in varying degree in most "normal" persons, one should consider coronary disease to be present only when the coronary circulation is interfered with sufficiently to produce certain clinical or laboratory abnormalities.

Coronary sclerosis is a pathologic diagnosis, which may or may not be clinically important in the individual case. The symptoms are those of acute or chronic coronary insufficiency. The laboratory findings are those indicating transient or chronic myocardial damage or ischemia. The electrocardiogram is of great help in this regard, for myocardial damage

or ischemia is frequently accompanied by interference with the normal electrical activity of the heart.

The electrocardiogram does not indicate coronary sclerosis or coronary occlusion; it may disclose an area of myocardial damage so situated that the probable cause is interference with the blood flow through a certain coronary vessel. One may have clinical evidence of coronary disease with an apparently normal routine electrocardiogram. Stress tests have been devised, seeking electrocardiographic abnormalities when the patient is subjected to standard exercise or to an oxygen-poor atmosphere. Such tests are useful, but not infallible; there may be false negative and positive results; at times these tests are dangerous. The ballistocardiogram is under study as a possible means of early detection of coronary artery disease; the results at present are still *sub judice*.

In conclusion, one can with accuracy diagnose coronary artery disease producing clinical symptoms and electrocardiographic abnormalities; one cannot diagnose with confidence coronary sclerosis in the absence of such accompaniments. The only reasonably accurate criteria are the clinical picture of coronary insufficiency and definite electrocardiographic abnormalities.

When the clinical picture is obvious, the electrocardiogram is confirmatory. When the clinical picture is suggestive, the electrocardiogram may furnish important corroborative evidence, but when negative it does not necessarily disprove the diagnosis. In the absence of any electrocardiographic abnormalities, the diagnosis of coronary artery disease must still be made if the clinical picture is sufficiently characteristic, provided no other adequate explanation for the symptoms of apparent coronary insufficiency can be found.

SIDNEY SCHERLIS, M.D.

Baltimore

► TO THE EDITORS: Accurate criteria indicating the probable existence of coronary disease concern the history or elucidation of one symptom or specific electrocardiographic changes.

The only symptom is, of course, angina pectoris, which requires sometimes expert knowledge to recognize because it varies somewhat in its intensity, duration, position, distribution, and production. As a rule, of course, it consists of substernal oppression, often radiating to the left arm or to both arms, produced by effort or excitement and subsiding in two or three minutes on resting or with the use of nitroglycerin.

The electrocardiogram often confirms the diagnosis already established by symptom, but sometimes it is the only evidence of the disease and, in the absence of other causes for the electrocardiographic abnormalities, specific changes in the QRS and T waves and S-T segments can be taken as probable evidence of the disease. For these detailed abnormalities, the reader should refer to one of the many authoritative texts.

Exercise and anoxemia tests are sometimes used to produce either the symptom or the electrocardiographic changes, but only rarely are such tests necessary.

PAUL D. WHITE, M.D.

Boston

► TO THE EDITORS: The article on the background of coronary disease by Drs. Menard M. Gertler, Stanley M. Garn, Samuel A. Levine, and Paul D. White is an excellent approach to the problem of coronary artery disease by anthropologic and biochemical analysis, but neither method can, as yet, adequately establish accurate criteria.

Only a moderate percentage of coronary patients are endomorphs with hyperuricemia, and, as stated by the authors, 6% of the normal control group had uric acid levels over 6 mg. as compared to 24% in the coronary group. This leaves 76% of the coronary group, then, who did not have hyperuricemia. Adequate criteria must be established along more dynamic lines at the present time, which does not at all detract from the basic value of the above research.

The difficult cases are those patients in whom coronary artery disease is suspected but whose fluoroscopic and roentgen examinations, blood studies, resting electrocardiograms, and physical findings are all normal.

In these patients the history should be carefully evaluated, stressing age, sex, tobacco use, type of work, temperament, rest, and recreation habits. Then Master's exercise tolerance test may be performed. I place more reliance on the single 2-step test than on the double test in most cases, since I feel that more borderline positive tests may result with the greater effort (despite the same rate of effort) if the same criteria are used for both the single and double 2-step tests. Like all laboratory tests, no matter how excellent, it must be evaluated as such. No test is 100% perfect, but if the exercise test is performed under required basal conditions, it will greatly enhance earlier diagnosis of coronary heart disease.

DHO 180 (dihydroergocornine), 0.1 to 0.5 mg. intravenously, has been used in an attempt to eliminate false positive tests due to emotional neurogenic overlay. In my opinion this drug does not make the definite differentiation sought for, since its action is at times erratic, resulting for some patients in a large blood pressure drop and bradycardia which may well decrease coronary blood flow. I feel, as Tandowsky, that this reduction in coronary blood flow may be appreciable in some cases and contraindicates this drug in the presence of coronary artery disease.

Another drug may be the answer, but it is difficult to see how any drug which alters heart rate, blood pressure, or cardiac output would on any sound scientific basis so alter the electrocardiographic changes following an exercise test as to differentiate organic from functional responses. In this small group of cases, I place more reliance upon a careful study of the history, age, sex, and so on, and a knowledge of the patient, and I correlate these with the results of the test.

The anoxemia test in which the patient breathes a 10% oxygen, 90% nitrogen mixture has also been employed by some as a diagnostic laboratory aid in this difficult group of cases. I feel strongly that this test should not be used routinely and that, when used, it should be carried out by medical men who have had

experience with the test, since it places the patient under very great stress, especially if he does have coronary artery disease. I have found the exercise tolerance test to be simpler, safer, and of greater diagnostic accuracy.

The ballistocardiogram is a new, simple, and useful laboratory aid, but of less diagnostic value than the exercise tolerance test at present. If abnormal in the younger age groups, it has greater significance than if normal. In my experience with the aged, the reverse is true—that is, it has much less value if abnormal, but has greater clinical meaning if normal.

There are exceptions. The exercise ballistocardiogram may give more valuable information in some cases as does the exercise tolerance test compared with the resting electrocardiogram; however, I have seen many distorted ballistocardiogram records following exercise, with bizarre patterns. What these mean, I feel, is still to be determined.

The flicker photometer test may also be considered a laboratory aid, but, unlike the others mentioned, it is subjective and therefore much less valuable.

In a few cases the entire examination may be normal, but careful fluoroscopy of the left ventricular border in the 5° left anterior oblique position may reveal a reversal of pulsations. If the heart is not enlarged, this usually means old myocardial infarction with a large area of injured heart muscle. In these cases the exercise test as well as the history is generally positive.

After a careful study of the history and the performance of all the above battery of tests, a few cases still remain in which the diagnosis of coronary artery disease becomes a matter of personal opinion, and this should be conservative and guarded.

SIDNEY STORCH, M.D.

New York City

► TO THE EDITORS: After reviewing the very excellent articles by Dr. Gertler and his associates on uric acid and cholesterol evaluations, it seems that these determinations are of little practical value in ruling out the presence of coronary artery disease. Their study demonstrates that most young coronary patients have normal uric acid levels. A small number have elevated levels.

The clinical history affords the practitioner the most valuable criteria in determining the probable existence of coronary artery disease. Only in rare instance does a patient develop a coronary occlusion without experiencing clinical symptoms (silent coronary).

Patients may be divided as follows:

The patient with symptoms indicative of acute myocardial infarction—Electrocardiographic changes typical of a myocardial infarction are of the greatest significance.

It often takes several days for electrocardiographic changes to occur; therefore, serial electrocardiographic changes are of great importance. Significant changes in the sedimentation rate, white blood count, and temperature are also valuable criteria.

The patient with a history suggestive of a myocardial infarction

which occurred sometime in the past—In this patient the resting electrocardiogram is of considerable diagnostic value if the pattern of an anterior or posterior myocardial infarction persists.

However, as the T-wave and S-T segment changes are transient and can occur in other conditions, their presence is not diagnostic unless they are accompanied by Q waves. Q waves of significant depth occurring in leads I, II, V_4, V_5, and V6 are diagnostic of a myocardial infarction due to coronary artery disease.

Ballooning of the myocardium often occurs after myocardial infarction. Heart fluoroscopy, roentgenkymography, and electrokymography demonstrate this phenomenon and help in confirming the diagnosis.

The patient with a normal electrocardiogram who has symptoms of angina pectoris—We find that Master's 2-step test is a very valuable procedure in indicating the presence or absence of coronary artery disease.

Many practitioners fear that harm will follow this test. We have just reviewed our five years of experience with this test on some 675 patients suspected of having coronary artery disease. No adverse effects have been observed from this simple office procedure. However, it appears that false negative tests occur, as 11 patients who had negative step tests according to present criteria had myocardial infarctions within one year.

As a result of this study, which will be published, it is concluded that the present criteria should be revised and consideration must be given to the amount of elevation of the S-T segment which existed in the control tracing. Also, it would appear that 0.5-mm. depression of this segment is significant in some leads in the single 2-step test.

ELIOT CORDAY, M.D.

Beverly Hills, Calif.

Management of Diabetes in Children*

Comment invited from I. M. Gourley, M.D.

► TO THE EDITORS: It is important to appreciate, as Dr. A. L. Chute has implied, that factors in the management of juvenile diabetes may differ from those in the control of the disease in the adult.

The initial stabilization cannot be too greatly emphasized. This, of course, should be carried out in a hospital with unmodified insulin. Brush has set forth a most helpful method in his outstanding article on this phase of the treatment (*Am. J. Dis. Child.* 67:429, 1944). Unmodified insulin is probably best in the early months as well.

Severe prolonged insulin shock, apparently associated with acute vascular changes in various areas of the brain, may require hospitalization with continuous intravenous glucose, repeated injections of epinephrine hydrochloride, sedation, intramuscular magnesium sulfate, and lumbar puncture.

Complete control should be the physician's aim. At times he will be required to accept less, when cooperation is lacking.

I. M. GOURLEY, M.D.

Cornwall, Ont.

*MODERN MEDICINE, June 15, 1951, p. 59.

Diagnostix

Here are diagnostic challenges presented as they confront the consultant from the first clue to the pathologic report. Diagnosis from the Clue requires unusual acumen and luck; from Part II, perspicacity; from Part III, discernment.

Case MM-204

THE CLUE

ATTENDING M.D: I have another puzzling case of heart disease for you today. The patient is a 30-year-old draftsman who has been cyanotic since he was 24. The referring physician suspects tetralogy of Fallot. He desires the staff's opinion as to whether surgery is advisable.

VISITING M.D: Tetralogy of Fallot is the most frequent form of cyanotic congenital heart disease compatible with prolonged life, but the late onset of cyanosis in this case should make us suspect a different lesion. Is the history accurate?

ATTENDING M.D: I am quite certain that it is. The patient is very intelligent and observing.

VISITING M.D: The age of onset of cyanosis is an important point in considering congenital cardiac disorders, but so often the history of cyanosis at birth and in early childhood is vague.

ATTENDING M.D: This patient has been told that he was blue for a week or so after birth but, until he entered grade school, no cardiac symptoms were noted.

PART II

VISITING M.D: I imagine that dyspnea then developed, at first on strenuous exertion and, as time passed, shortness of breath caused progressive curtailment of activity.

ATTENDING M.D: That is correct. The man has few other complaints except for frequent colds and slight hemoptysis on two occasions. Edema has never appeared. There is nothing in the history to suggest rheumatic fever. Would you care to examine the patient?

VISITING M.D: Yes. *(They enter the patient's room.)* Cyanosis of the lips and nail beds is easily seen; also slight but definite clubbing of the fingers. Other pertinent physical findings are limited to the heart, which seems slightly enlarged to the left and has a convex left border. I cannot feel a thrill but there is a rough grade 2 systolic murmur in the third and fourth interspaces loudest just to the left of the sternum. The second pulmonic sound is loud. I hear no diastolic murmur. *(They retire to the corridor.)*

ATTENDING M.D: Incidentally, the blood pressure was 120/75 mm. of Hg. Routine laboratory studies were unrevealing except for hemoglobin of 18 gm., an erythrocyte count of 7 million, and hematocrit of 60%.

VISITING M.D: In all probability secondary polycythemia. What about

the electrocardiogram and roentgen studies?

PART III

ATTENDING M.D: The electrocardiogram showed only a right axis deviation. By fluoroscopic examination the heart size was within normal limits but the pulmonary conus was prominent and the pulmonary artery large and pulsating. Vascular shadows in the lung were prominent, well out to the periphery.

VISITING M.D: That information practically excludes tetralogy of Fallot, but I believe cardiac catheterization should be done to determine definitely any surgically correctable lesion.

ATTENDING M.D: *(Two days later)* Cardiac catheterization supplied the following information: The oxygen content of blood samples taken from the superior vena cava, right atrium, right ventricle, and pulmonary artery was 15.8, 16, 19.5, and 20 volumes per cent, respectively. Pressure recorded in the right ventricle was 95/0 mm. of Hg and in the pulmonary artery 95/40 mm. of Hg. Blood from the femoral artery was 82% saturated with oxygen.

VISITING M.D: The high pulmonary artery pressure is incompatible with pulmonic stenosis, so a diagnosis of tetralogy of Fallot is untenable. How did you interpret the findings?

PART IV

ATTENDING M.D: Well, the significant difference in oxygen content between right atrium and right ventricle is evidence of a shunt of blood from left to right ventricle. The elevated pressure in the right ventricle and pulmonary artery reflects an increased pulmonary blood flow and probably some increase in pulmonary vascular resistance. The low femoral arterial oxygen and, of course, the cyanosis mean a right to left shunt as well. I believe the whole picture best fits a diagnosis of Eisenmenger complex.

VISITING M.D: Which is a combination of a high interventricular septal defect, dextroposition of the aorta, and a dilated pulmonary artery. I am in agreement with your conclusion.

ATTENDING M.D: Couldn't the pulmonic stenosis of a tetralogy be ruled out by the fluoroscopic demonstration of a large pulmonary artery?

VISITING M.D: Not with assurance. Poststenotic dilatation of the pulmonary artery can occur, although pulsation will be absent. Of more importance is the demonstration of prominent vascular shadows in the lung. With tetralogy of Fallot, the pulmonary vascular markings are minimal, the so-called anemic lung. Surgery is not recommended for this patient.

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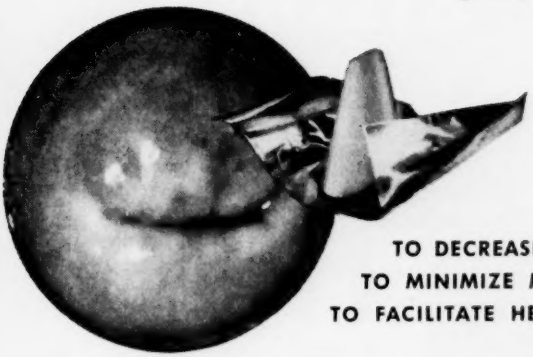

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1. Editorials and Comments, J.A.M.A., vol. 147, No. 4 (September 22), 1951.

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Book Chapter

Physiologic Principles Underlying Treatment of Peptic Ulcer*

DAVID J. SANDWEISS, M.D.†

From a chapter of the book, Peptic Ulcer

THE cause of ulcer is not known. However, we must accept the fact that hydrochloric acid is an important aggravating factor when an ulcer is present.

This conclusion is supported by clinical findings that ulcer rarely is evident in patients with histamine-proved anacidity. Experimentally, hydrochloric acid in physiologic concentration does not cause an ulcer. It only damages the mucosa and makes it susceptible to peptic digestion. "For acid alone to cause an ulcer, the stomach must secrete at the maximal rate at which it is capable, a condition which rarely occurs in the ulcer patient."

Also, both in vitro and in vivo, experiments show that proteolytic action of pepsin takes place only in an acid medium. Consequently, medical and surgical regimens of treatment are aimed at neutralizing, depressing, or eliminating hydrochloric acid. Most patients will become symptom free, although not necessarily cured, under such regimens.

However, it is not our intention to convey the impression that acid is the cause of peptic ulcer or that it is responsible for the recurrence of attacks which characterize this disease.

Gastric digestion of protein occurs through the action of *pepsin* in an optimum range of acidity. Pepsin has no significant action above *p*H 3.5 and is destroyed above *p*H 7. One might, therefore, assume that, to heal an ulcer, one should either produce achlorhydria or inactivate pepsin. However, more effort has been concentrated on reducing acidity of the gastric juice than on reducing its peptic activity, probably because of the simpler processes involved.

Moreover, we have been unsuccessful to date in efforts to completely inactivate pepsin. Because of the approximately similar anatomic distribution of the acid- and pepsin-secreting cells and their almost iden-

* From the book, *Peptic Ulcer*, edited by David J. Sandweiss, published under the auspices of the American Gastroenterological Association, 790 pages, W. B. Saunders Company, Philadelphia, 1951. $15.

† Associate Attending Physician, Division of Internal Medicine, Harper Hospital, Detroit.

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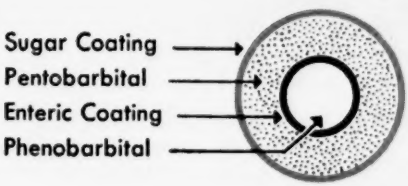

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tical innervation, measures used for depressing or eliminating acid secretion serve similarly for pepsin secretion. At present, the most practical antipeptic therapy is antacid therapy, because pepsin cannot act in the absence of acid.

Acid secretion is influenced by humoral factors of gastric and enteric origin. Appropriate stimuli applied to the pyloric antrum result in secretion of acid, apparently through liberation of a stimulatory hormone, *gastrin*. Gastrin is liberated when the stomach is distended by solid food or even by liquids (mechanical stimuli).

It is also liberated by means of *secretagogues* (chemical stimuli). The most powerful of these are meat extractives and products of protein digestion, that is, proteoses and peptones produced during the digestion of proteins of fish and meat. When mechanical distention takes place or when these secretagogues come in contact with pyloric mucous membrane, they cause release of gastrin, mainly from the pyloric mucosa, which is carried by the blood stream to parietal cells, where it stimulates secretion of hydrochloric acid.

Enteric aspects of gastric secretion are less well defined. After their intestinal absorption, certain products of protein digestion—secretagogues—are believed to act directly on the parietal cells as chemical excitants.

The acid-secreting or parietal cells and the pepsin-secreting or chief cells are under *vagus* control. Excitation of the vagus nerves, either centrally or reflexly, results in secretion of acid gastric juice with high peptic activity. Psychic and emotional factors may be considered as central stimuli, while stimuli from the mouth—taste—give rise to reflex secretion via the vagus. Possibly because of the high tempo of living, modern man apparently is subjected to constant stress, with the result that the psychic or nervous phase of gastric secretion is predominant.

In recent years, attention has also been directed toward the functions of the mucus cells. The problem of their innervation remains unsettled, as do also the chemical and hormonal regulation of their activity. *Mucus* forms a blanket which covers the secretory surface of the stomach. Its function is to protect the underlying parietal and peptic cells and the muscularis against all varieties of irritative agents—chemical, mechanical, and thermal. Acid and pepsin penetrate it with difficulty. In addition, it appears that some components of mucus have direct antipeptic activity. However, there is no definitive evidence that mucus is deficient in ulcer patients.

There are four known alkaline secretions in the upper small intestine: secretion from Brunner's glands of the upper duodenum, pancreatic juice, succus entericus from the crypts of Lieberkühn, and bile.

- Secretion from Brunner's glands is under hormonal control. The hormone, *duocrinin*, is released by the intestinal mucosa when certain foods and hydrochloric acid contact it. Hydrochloric acid is a strong stimulant of Brunner's glands.
- Pancreatic secretion has the highest bicarbonate concentration of any constituent of the duodenal contents and is also under hormonal control. The hormone *secretin* is liberated from duode-

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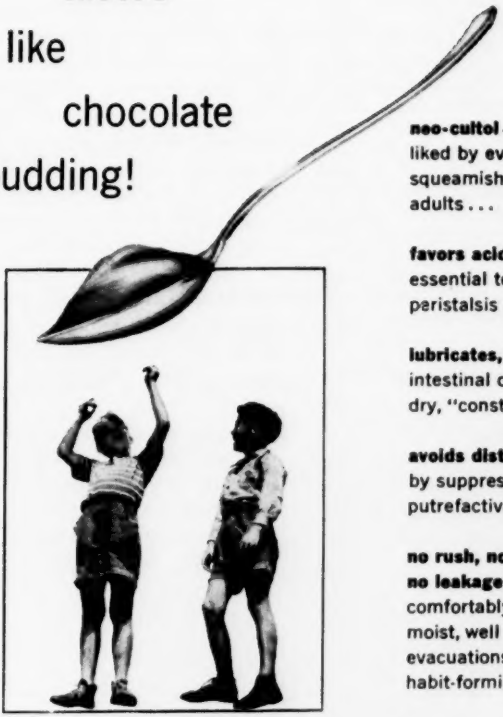

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nal mucosa when acid, fat, or peptone contacts it.

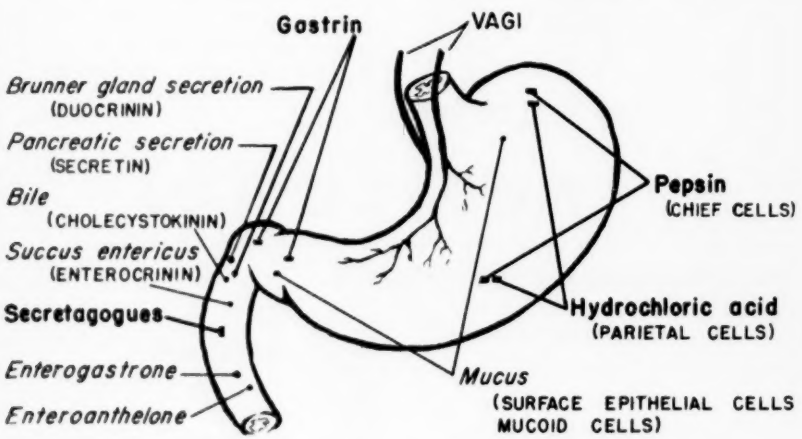
- Secretion from the crypts of Lieberkühn is thought to be under the influence of *enterocrinin*—a hormone released when peptone, a product of protein digestion, contacts intestinal mucosa.
- Bile secretion is stimulated by secretin as well as by choleretics (bile salts, meat). Because of its low alkalinity, bile has only limited neutralizing ability, but may serve as a diluting agent. Fat, as it enters the duodenum, causes a hormone (cholecystokinin) to be released, contracting the gallbladder and thus expelling additional bile into the duodenum. We thus have in the upper small intestine a mechanism for diluting and neutralizing acid of the oncoming gastric contents in an area believed to be particularly susceptible to acid-pepsin digestion.

Since the earliest studies of Pavlov and others, introduction of fat into the intestine has been known to inhibit secretion of gastric juice. This is due to an intestinal hormone with specific gastric secretory depressant action. This hormone—enterogastrone—is released when fat or concentrated sugar solutions come in contact with the duodenal mucosa. Enterogastrone inhibits not only secretory but also motor activity of the stomach.

Evacuation of gastric contents into the intestine depends on numerous factors, chief of which is an adequate gradient between intragastric pressure and intraduodenal pressure. In general, stimulation of the vagus produces increased tonus and motility of the stomach and, probably, relaxation of the pyloric sphincter.

So-called spasm of the pylorus is a rare occurrence. This does not, however, rule out the possibility of pyloric spasm which may be associated with pyloric or duodenal ulcer, or of pyloric obstruction due to edema.

It has been demonstrated by Palmer and Pickering that pains typical of ulcer may be reproduced by introducing acid directly into the duodenum. Pain associated with the Palmer acid test might be explained



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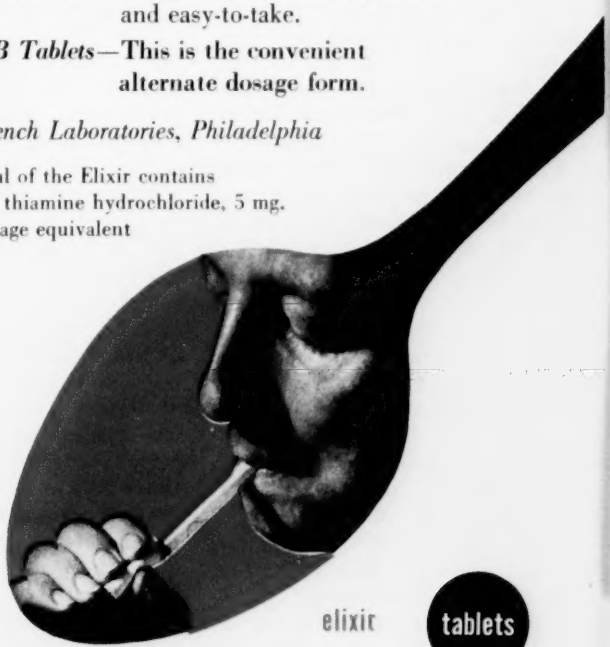

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on the basis of acid irritation of the base of the ulcer; *spasm* of the duodenal cap produced by excessive acidity or other factors might also be a cause of ulcer pain. With severe ulcer pain, we have noted a marked increase in duodenal tone and, at times, incomplete tetany. Hypermotility of the duodenum should be considered when treatment is instituted.

MEDICAL THERAPY

The present-day medical regimen is based on the generally accepted theory that, to heal a gastroduodenal ulcer, hydrochloric acid should be neutralized, its secretion inhibited or eliminated, and the motor activity of the stomach and duodenum reduced. There are definite inherent physiologic phenomena, some tending to stimulate and others to inhibit gastric and duodenal secretions and motility. Treatment, therefore, in addition to supplying an adequately nutritious diet, should also comprise: [1] administration of foods and antacids which buffer or neutralize hydrochloric acid in the gastric contents, [2] exclusion of foods which act as mechanical, chemical, or thermal irritants to the mucosa, [3] elimination or minimization of factors that stimulate gastric secretion (gastrin, vagi, secretagogues), [4] support for inherent factors which inhibit the secretion of hydrochloric acid (enterogastrone mechanism) and those that stimulate secretion of alkaline duodenal contents, [5] inhibition of motor activity of the stomach and duodenum, and [6] physical and mental rest.

Foods and antacids to buffer or neutralize HCl—Milk and cream, and the foods containing them, have a high acid-combining power. Fat, particularly in cream and egg yolks, stimulates the enterogastrone mechanism and thus inhibits gastric secretion and motility. In addition, it has a high caloric and nutrient value, thereby providing sufficient calories for energy. Nonmeat proteins such as Jello, cheese, and the white of egg act as effective buffers to gastric acidity.

Nonmeat proteins in sufficient quantity, 70 to 80 gm. a day, provide sufficient proteins for tissue synthesis, thus keeping the patient in nitrogen balance. These foods are administered in small servings, so as not to distend the stomach, and given frequently to dilute, neutralize, and buffer the hydrochloric acid and provide added nutrients to the diet.

Antacids reduce acidity of gastric contents either by simple chemical reaction or by physical adsorption of hydrochloric acid. Complete neutralization of gastric contents with antacids is practically impossible. It has been estimated that, on standard Sippy management, from 25 to 50 times as much antacid is given as would be required to neutralize the total daily output of hydrochloric acid. However, complete neutralization is rarely achieved, except perhaps by the Winkelstein continuous intragastric drip therapy. In the writer's opinion, total neutralization of acid is unnecessary.

Foods that act as mechanical, chemical, or thermal irritants to mucosa—Excluded from the diet are foods that act as mechanical irritants to the mucosa, such as raw fruits

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1. Waters, E. G., and Wager, H. P.: Amer. J. Obstet. & Gyn. 60:885, 1950.

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and raw vegetables, which have high cellulose content.

Condiments are also excluded because of their irritant action. Nutriments which may be chemically irritating, such as those that are acid, salty, or excessively sweet, should also be eliminated. All foods ought to be of moderate temperature.

Factors that stimulate gastric secretion—Meat and meat extractives are potent gastric stimulants. When these come in contact with the mucosa of the pyloric antrum, gastrin is released. Gastrin stimulates the parietal cells to secrete hydrochloric acid. For this reason, meat, meat soups, and bouillons are eliminated from the ulcer diet in the early stages of treatment.

Gastrin is also liberated when the antrum of the stomach is distended. For this reason small and frequent feedings are given.

Products of meat protein digestion—peptones and proteoses—act as secretagogues in the duodenum. These stimulate the parietal cells to secrete acid. Alcohol in the stomach causes release of histamine, which is a powerful gastric secretory stimulant. Caffeine acts directly on the parietal cells, thus also stimulating production of hydrochloric acid. Certainly in the early stages of ulcer therapy and during convalescence, these gastric secretory stimulants should be excluded from the diet of persons with ulcers.

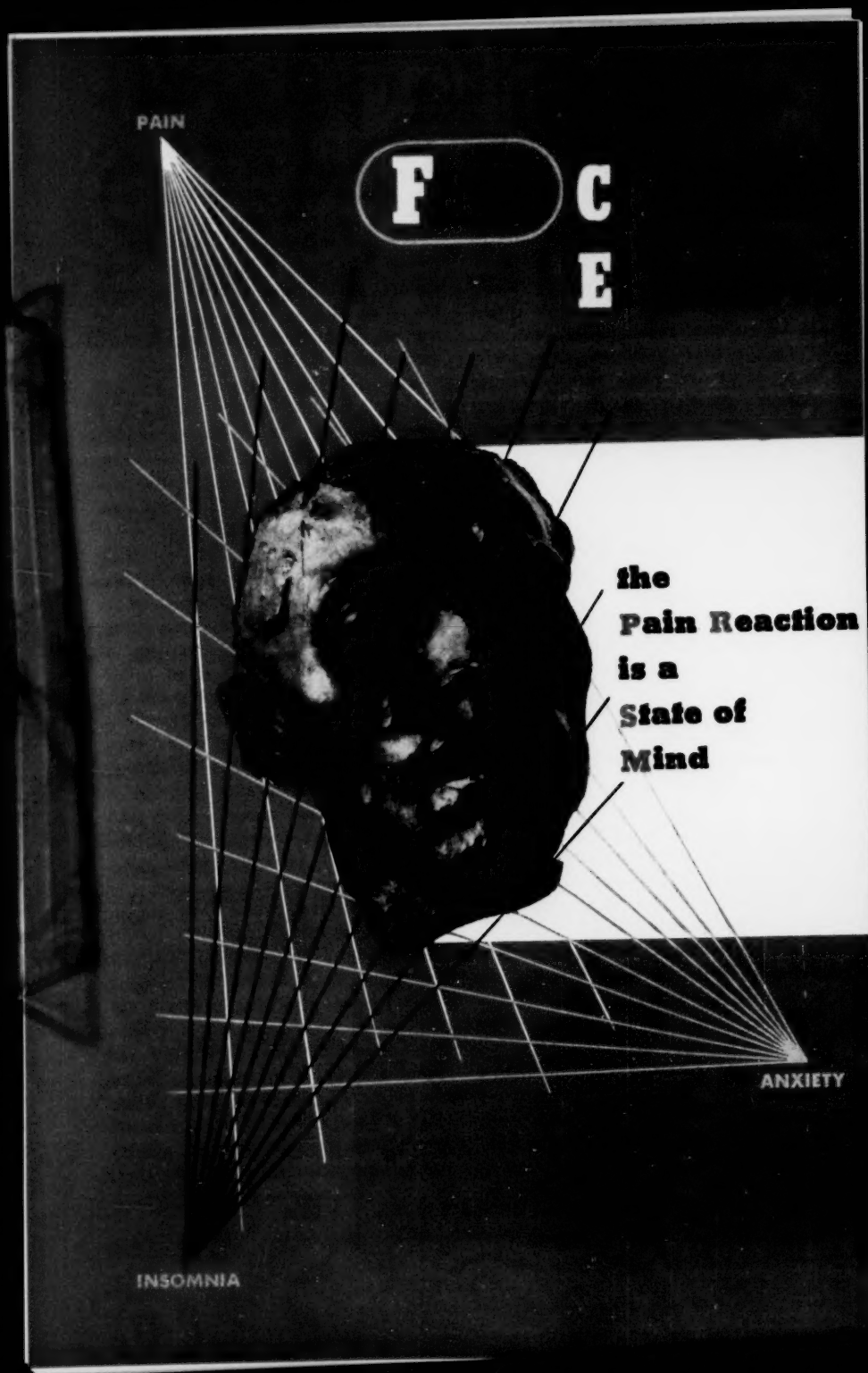
The acid-secreting and pepsin-secreting cells are under control of the vagus. Since psychic and emotional factors act as direct stimuli to the vagi, drugs are used to depress their action. These drugs may be classified as acting centrally (sedatives), blocking the autonomic ganglia (Banthine, tetraethylammonium salts), or paralyzing peripheral vagal nerve fibers (atropine and derivatives). The need is great for better agents, acting specifically on vagal fibers of the stomach and not on the vagal fibers to other organs, such as the heart.

Roentgen irradiation of the fundus and corpus of the stomach is being used in an effort to impair or inactivate the parietal or acid-secreting cells. Its aim is to produce an anacidity; when this is produced, healing of the ulcer takes place. However, the effect of radiation on acidity is somewhat unpredictable. Often the acid secretion returns, and the ulcer may then recur.

Factors that inhibit secretion of HCl and stimulate secretion of alkali—Contact of fat with duodenal mucosa leads to liberation of enterogastrone. Thus the fat in the diet, particularly in cream, yolk of egg, and milk, inhibits gastric secretion and motility. For these reasons milk and cream have withstood the test of time and constitute the basis of the ulcer regimen.

The enterogastrone mechanism may also be called into play by administering 2 oz. of olive oil into the stomach, preferably at bedtime. As it reaches the duodenal mucosa, this fat causes release of enterogastrone, thus inhibiting secretory and motor activity of the stomach during the night when the stomach is devoid of food and other medicaments. While such doses of olive oil are important for acutely ill patients, there

(Continued on page 127)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form, Phenaphen with Codeine provides *high* analgesia and sedation on relatively *low* codeine dosage, with reduced side-effects. The analgesics (aspirin 2½ gr. and phenacetin 3 gr. per capsule) and sedative (phenobarbital ¼ gr.) effectively potentiate a small dosage of codeine (either ¼ or ½ gr.). And the addition of the spasmolytic hyoscyamine (0.031 mg.)—to implement the analgesic-sedative action, and to help counteract any tendency to nausea or constipation so often provoked by codeine medication—provides a combination that has "proved

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is distinct limitation to the practical importance of this method of controlling night secretion, especially because of the large quantity of fat required to produce significant effects.

An exogenous enterogastrone has been prepared from hog's intestinal mucosa which has high secretory depressing activity. A similar gastric secretory depressant, urogastrone, has been prepared from urine. In dogs, enterogastrone and urogastrone are strong inhibitors of gastric secretion when given intravenously. Subcutaneously and intramuscularly they have little or no effect, either in dogs or human beings. At present, they have no practical value as gastric secretory depressants, since they cannot be administered intravenously to human beings without side effects.

Duodenal contents are alkaline secretions, chief of which are the secretions from Brunner's glands and the alkaline secretion from the pancreas. The former is under the influence of duocrinin, the hormone released by the intestinal mucosa when certain foods and particularly hydrochloric acid reach the duodenum; the latter is under the influence of secretin, a hormone liberated from the mucosa of the duodenum when hydrochloric acid, fat, and peptone contact it. Cream and milk, when entering the duodenum, tend not only to inhibit gastric secretion and motility, but also to cause expulsion of bile from the gallbladder by the cholecystokinin mechanism and stimulate alkaline pancreatic juice, which tends to increase the alkalinity of duodenal contents.

Hydrochloric acid is one of the effective stimulants to both Brunner's glands and pancreatic secretions. Paradoxically, while we attempt in therapeutic regimens to eliminate hydrochloric acid in the stomach to permit healing of a duodenal ulcer, hydrochloric acid entering the duodenum is one of the chief factors causing duodenal alkaline secretions, also necessary for ulcer healing. The same holds true for enterocrinin, the hormone which stimulates the crypts of Lieberkühn to secrete the alkaline succus entericus. Enterocrinin is released when peptones come in contact with intestinal mucosa. Yet peptones, when reaching the small bowel, also act as secretagogues which stimulate secretion of hydrochloric acid in the stomach.

It would be particularly helpful if some means could be found to increase the neutralization capacity within the duodenal bulb proper. Agents capable of selectively increasing the alkaline secretion of Brunner's glands and the bicarbonate secretion of the pancreas should prove a real addition to the medical regimen of duodenal ulcer.

Inhibition of motor activity—The motor activity of the stomach is inhibited by the enterogastrone mechanism, by drugs used to depress vagal activity (Banthine, atropine), drugs that stimulate sympathetic nerve activity which are largely inhibitory, such as ephedrine, and drugs used as musculotropic antispasmodics, acting directly on muscle fibers, such as trasentine. Drugs acting centrally to depress the vagi are also helpful (phenobarbital).

Physical and mental rest—Emotion-

(Continued on page 130)

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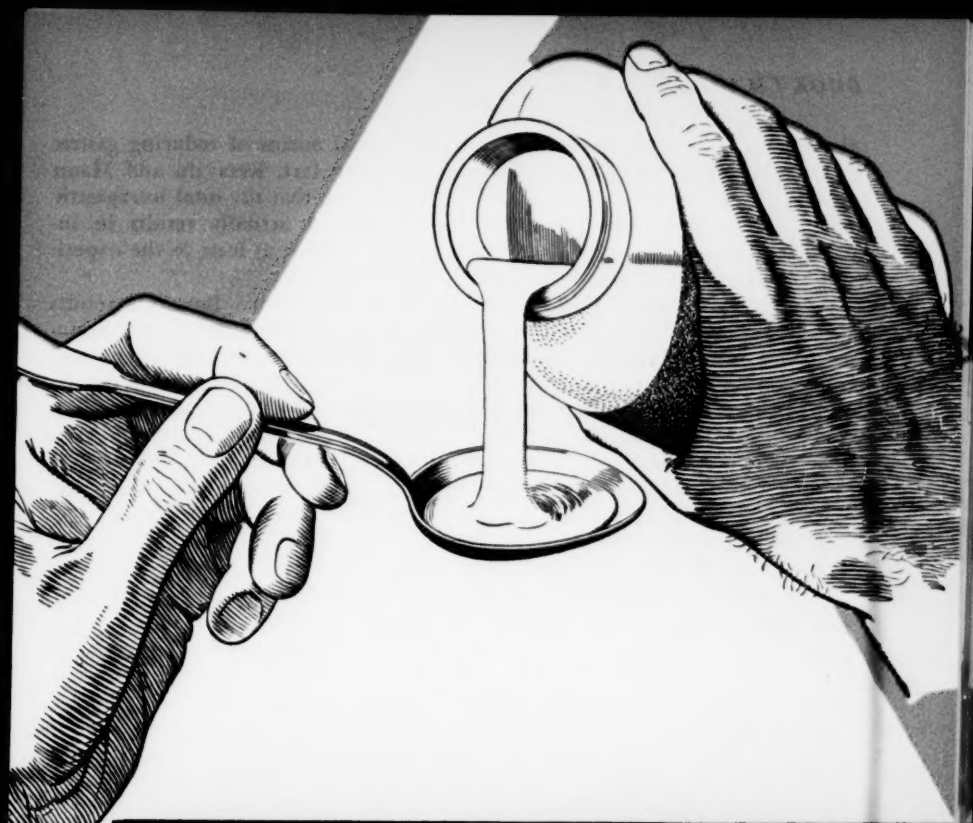

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al disturbances, such as prolonged anxiety, resentment, and hostility, increase the secretion of acid gastric juice and probably also the susceptibility of the mucosa to ulceration. Both mental and physical rest are, accordingly, valuable aids in the management of gastroduodenal ulcer. This goal is often hard to accomplish. Difficult as this may seem, many authorities insist that the patient adjust his life around the ulcer.

Diet—The physiologic principles enumerated above deal primarily with the secretory and motor factors in the stomach and duodenum. Fully as important is an adequately nutritious diet—calories, protein, minerals, and vitamins—which must be supplied to overcome the dietary inadequacies during the early stages of ulcer therapy and to meet the needs of the majority of patients who continue to work during treatment.

Antiulcer or anthelone factors—Use of certain biologic extracts, Uroanthelone and Enteroanthelone, to stimulate ulcer healing and delay ulcer recurrences has been under investigation.

SURGICAL THERAPY

As in medical therapy, the chief aim of surgical therapy is to combat the hydrochloric acid and objectionable motor factors.

Gastroenterostomy—The aim of gastroenterostomy is to neutralize the acid gastric chyme or reduce the hydrochloric acid concentration by constructing a gastroenteric stoma through which the duodenal alkaline content, as it reaches the stoma, regurgitates into the stomach. However, regurgitation is an extremely ineffectual means of reducing gastric acidity. In fact, Kesavalu and Mann have shown that the total intragastric regurgitation actually results in increased acidity, at least in the experimental animal.

The new stoma, however, results in more adequate and rapid drainage of the stomach and diminished activity of the antrum and duodenum, thus lessening their motor activity. It is probable, however, that the most beneficial effect produced by a properly functioning gastroenterostomy is the diversion in large part of the alimentary stream away from the ulcer. After gastroenterostomy, one must still apply the physiologic principles outlined under medical treatment, since the factors that stimulate and inhibit gastric secretion and motility are still active.

Subtotal gastrectomy—With this surgical procedure, as in gastroenterostomy, there is some neutralization of the gastric contents by the regurgitated duodenal alkaline juice, a diminished motor activity of the stomach and duodenum, and diversion of the alimentary stream away from the ulcer. However, with subtotal resection, the antrum and greater portion of the corpus are resected. By removing the antrum, the hormonal (gastrin) mechanism is entirely eliminated. By resecting the greater part of the corpus, most of the acid-secreting area is removed, so that the capacity of the stomach to secrete hydrochloric acid and pepsin is decreased.

Two points should be noted with regard to subtotal gastrectomy:

1] A true anacidity should not be expected from this operation. The pa-

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rietal (hydrochloric acid–secreting) cells are still present, though in diminished number, in the remaining upper part of the stomach. Nothing short of total gastrectomy will produce true anacidity. However, a true histamine-fast achlorhydria apparently does result in as many as 90% of patients after a three-quarter gastric resection. The reason for this achlorhydria is not readily explainable on physiologic grounds, but its existence probably plays an important role in the effectiveness of the operation.

2] The mucosa of the gastrointestinal tract shows a caudal gradient of increasing susceptibility to damage by acid and pepsin. Thus the corporic mucosa is least susceptible, while the pyloric, duodenal, jejunal, and ileal mucosa become increasingly susceptible in the order listed. Therefore, the gastroenteric stoma should be as high in the small intestine as possible (a short afferent loop).

Vagotomy—By sectioning both vagi completely, the pathway for nervous secretory stimuli is removed; thus the psychic phase of gastric secretion is eliminated. The motor activity of the stomach is also diminished. It should be noted, however, that the gastric or hormonal phase of gastric resection (the gastric mechanism) and the intestinal phase of gastric secretion (the secretagogue effect) are still intact, though the response to those stimuli is reduced somewhat. Insofar as postvagotomy gastric-secretion studies are concerned, none of the tests used, including night secretion, insulin, and histamine, has shown an absolute correlation with the clinical results.

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Short Reports

Cardiology

Cholesterol in Thyroid Disease

Low plasma cholesterol is generally associated with hyperthyroidism, and a high level with hypofunction. The opposite is true of cholesterol in bile, find Dr. Ray H. Rosenman and associates of Mount Zion Hospital, San Francisco. Rats aged 8 or 13 weeks were given thiouracil or thyroid substance to reduce or increase glandular activity, respectively. The biliary concentration of cholesterol and the amount excreted daily in bile were far above normal for the hyperthyroid group. Conversely, hypothyroid values were about half those of healthy rats.

Science 114:210-211, 1951.

Surgery

Test for Tubed Pedicle Graft

The degree of circulation in tubed pedicles and flaps can be determined before transplantation by clearance of radioactive sodium. Dr. Herbert Conway and associates of the Veterans Administration Hospital, the Bronx, N.Y., employ Na^{24} in plastic surgical reconstructions. From 0.1 to 0.5 microcurie is injected intradermally in 0.05 cc. of isotonic saline solution near the end of the pedicle, and the same dose is instilled in the corresponding region on the other side of the body. Circulation is measured with a Geiger counter containing a thin mica window placed over the site. If radiosodium disappears at approximately equal rates, transference of prepared tissue will probably succeed.

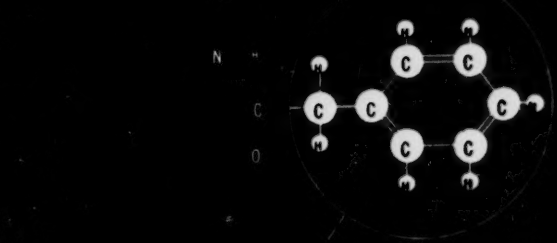
Proc. Soc. Exper. Biol. & Med. 77:348-351, 1951.

Prostheses

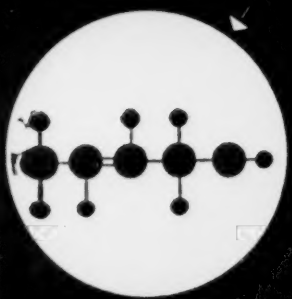
Aid for Paralyzed Hand

Essential tasks can be performed by flaccid fingers with the help of a jointed, glovelike prosthesis, the Handy Hand. Dr. Herman Kabat and Dorothy Rosenberg describe the apparatus, which is designed on the principle of the amputee's hook. Thumb and fingers are held firmly together by an elastic band and opened at will with a harness and cable by lifting or abducting the scapula. The glove has three sections, one covering the fingers, another the metacarpal and carpal bones, and a forearm piece added to stabilize a limp wrist. Harness may be fastened to both shoulders or to one shoulder and a leg or wheel chair. At the Kabat-Kaiser Institute for Neuromuscular Rehabilitation, Vallejo, Calif., considerable use of the arms was gained by means of this prosthesis in 7 cases. For example, three years after fracture of the cervical spine, a young woman with completely paralyzed hands learned to feed herself with the mechanical aid, use a toothbrush and hairbrush, put on cosmetics, write, and even manipulate a typewriter.

Arch. Phys. Med. 32:462-464, 1951.



and a change for the better



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Virology

Hepatitis Virus in Urine

Infectious hepatitis may be spread by virus excreted in the urine long after apparent recovery. Organisms were obtained from dogs at the New York State Veterinary College, Ithaca, N.Y., after infection and restoration to good health, at intervals ranging beyond 5 months from the time of inoculation. When symptoms had disappeared, no virus could be found in the blood, saliva, nasal washings, or feces. However, Drs. George C. Poppensiek and James A. Baker observed signs of persistent focal interstitial nephritis, implicating the kidney as the source of urinary virus.

Proc. Soc. Exper. Biol. & Med. 77:279-281, 1951.

Physical Medicine

Destructive Contracture

Muscles may be irreparably damaged if contracted for prolonged periods. After myostatic contracture was produced in rabbits by tenotomy, arthritis, or tetanus toxin, Dr. Ernst Fischer and Helen V. Skowlund of the Medical College of Virginia, Richmond, observed patchy lesions with part of the fiber replaced by fluid throughout the affected muscles. Changes were more severe than in simple disuse atrophy, particularly in respect to decrease in dry weight and the concentration of structural and enzymatic proteins in true muscle.

Arch. Phys. Med. 32:441-446, 1951.

Therapeutics

Antiallergic Penicillin

Compenamine, a penicillin salt, not only causes fewer reactions than other forms but lessens untoward response of patients already sensitized. The base is antiallergic but is not antihistaminic and has the formula N-methyl-1, 2-diphenyl-2-hydroxyethylamine. Dr. Alfred B. Longacre of Louisiana State University, New Orleans, estimates that less than 1% of those treated will have adverse effects. Of 196 persons given the new preparation, including 12 with penicillin allergy and 11 sensitive to some other agents, only 5 had undesirable reactions.

Antibiotics & Chemother. 1:223-230, 1951.

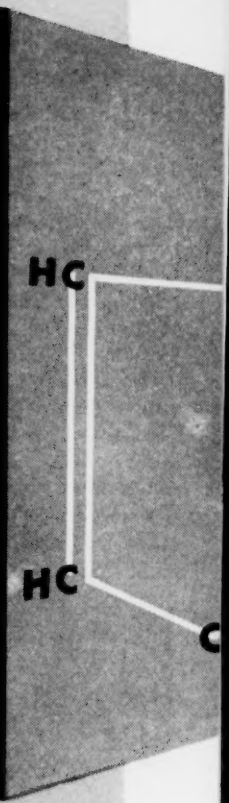
Antibiotics

Terramycin for Meningitis

Patients with meningococcic, influenzal, or pneumococcic meningitis are rapidly benefited by terramycin therapy. Practically no unpleasant reactions develop, and recovery often seems complete in six days, report Drs. Archibald L. Hoyne and Emmanuel R. Riff of Cook County Contagious Disease Hospital, Chicago. A child receives 250 mg. in 250 cc. of 5% dextrose solution by vein, then oral doses of 250 mg. every four to six hours, with milk or after meals. The adult dosage is 500 mg. All but 1 of 23 patients survived with no other medication.

J. Pediat. 39:151-154, 1951.

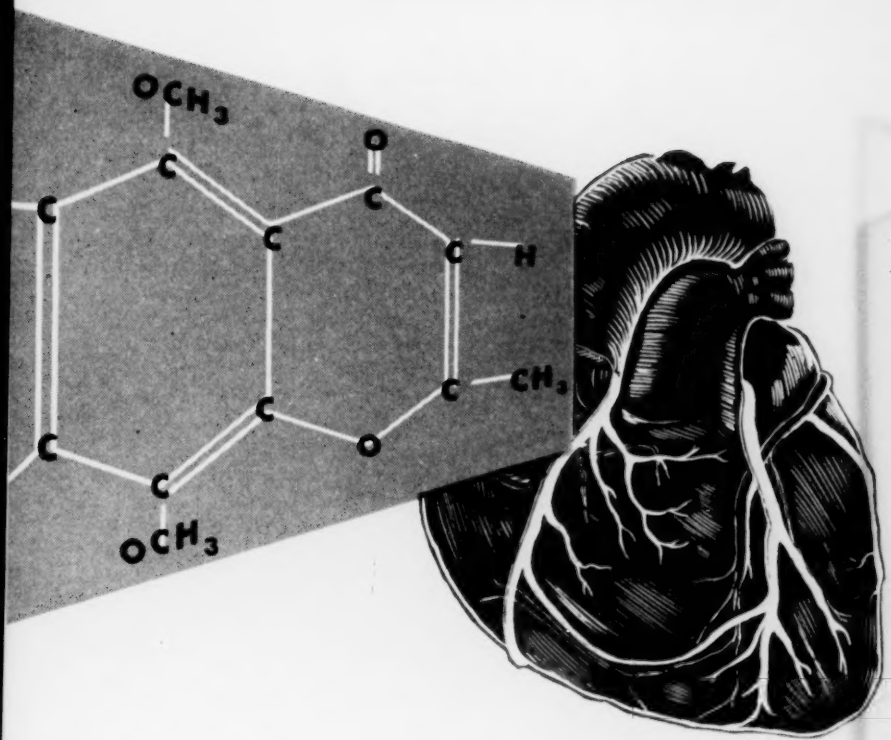
"the more severe the case, the more striking the improvement"... with*



Carefully controlled clinical studies prove that KHELLOYD provides definite relief from pain in about 75% of the angina pectoris cases studied. Thus, KHELLOYD does everything that drug therapy can be expected to do in this condition.

Furthermore, "... the more severe the case, the more striking the improvement."

KHELLOYD, unlike impure mixtures, permits full 50 mg. therapeutic doses to be administered to most patients without undesirable side effects.



Since KHELLOYD is a potent therapeutic weapon, the dosage must be individualized to the patient. Recommended initial dosage is 1 tablet daily for 1 week; then increased to 2 tablets daily, if necessary, as the average maintenance dose.

KHELLOYD W/P

The frequent association of nervous tension with angina and the occasional incidence of nausea often makes KHELLOYD W/P preferred.

Each tablet contains:

KHELLOYD	**50 mg.**
Phenobarbital	**¼ gr.**

KHELLOYD is also being well received in the treatment of bronchial asthma.

Available—KHELLOYD (white) scored 50 mg. pure khellin tablet.
KHELLOYD W/P (yellow) 50 mg. pure khellin with phenobarbital.
Both products are packaged in bottles of 50 and 250 tablets.

*Scott, R. C., and Seiwert, V. J., to be published.

Khelloyd is the trademark of

LLOYD BROTHERS, INC. • CINCINNATI 3, OHIO

Radiology

Cobalt-60 Irradiator

A radioactive cobalt machine intended for high-power therapy of deep cancer has been completed for installation in the M. D. Anderson Memorial Hospital at Houston. Radiation equal to that of a 2,000,000-volt roentgen apparatus will be supplied at a cost within the means of small hospitals throughout the country. Energy is provided by 4 cobalt wafers, each 1 in. square and ⅜ in. thick, activated by about a year in an atomic pile. The cobalt head is only 3 ft. long and 13½ in. in diameter. Development was aided by the late Dr. Leonard G. Grimmett.

Biochemistry

Liver Disease and Atherosclerosis

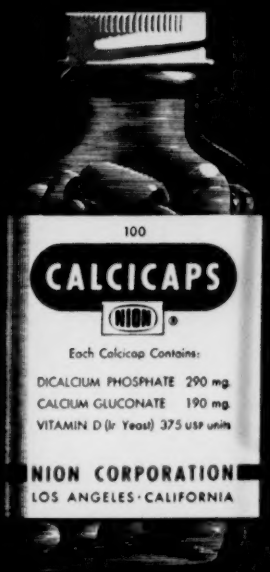
Individuals with Laennec's cirrhosis are quite as susceptible to atherosclerosis as is the rest of the population, contrary to a long-held general impression. As an index, Drs. F. T. Pierce and J. W. Gofman of the University of California, Berkeley, determined serum levels of the giant cholesterol-bearing molecules with an ultracentrifuge in 32 cases of chronic hepatitis. Ages were 17 to 72 years. Lipoproteins of the S_f10-20 class were at least as abundant and possibly more so than is usual in healthy people of corresponding age and sex.

Circulation 4:25-28, 1951.

Calcicaps

NION

When IRON is ALSO desired

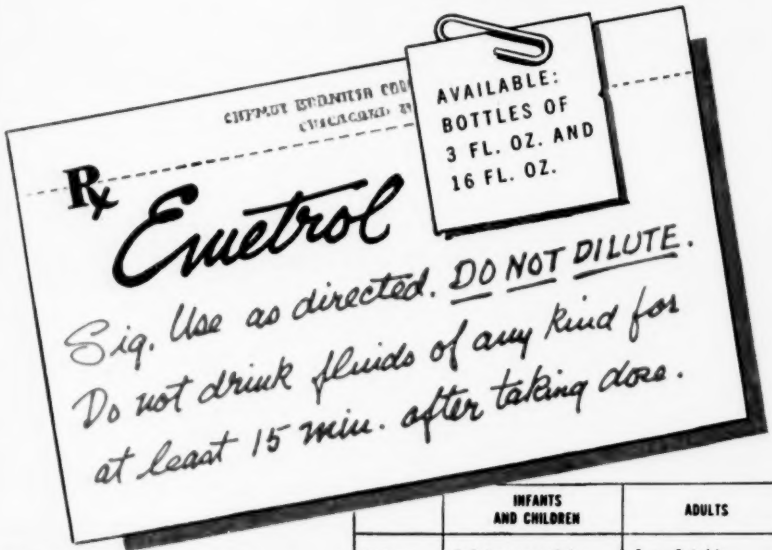


FOR RAPID...SAFE...PHYSIOLOGIC CONTROL OF FUNCTIONAL VOMITING

EMETROL®

PHOSPHORATED CARBOHYDRATE SOLUTION

- before and after anesthesia
- in early pregnancy
- in epidemic vomiting



	INFANTS AND CHILDREN	ADULTS
Before and after anesthesia	1-3 teaspoonfuls 15-30 minutes before anesthesia and as soon as feasible after operation	1 or 2 tablespoonfuls at same intervals as for children
Early pregnancy		1 or 2 tablespoonfuls on arising, repeated every three hours or whenever nausea threatens
Epidemic vomiting	1 or 2 teaspoonfuls at 15-minute intervals until vomiting ceases	1 or 2 tablespoonfuls at 15-minute intervals until vomiting ceases

EMETROL is a phosphorated carbohydrate solution which controls functional vomiting through a unique physiologic action. Clinical findings have established its broad therapeutic effectiveness.[1]

Since EMETROL is free of antihistamines, barbiturates, narcotics, or stimulants, it may be prescribed for patients of all age groups with complete safety. Its delicious "peppermint candy" taste makes every dose welcome to the patient.

1. Bradley, J. E., et al.: J. Pediat. 38: 41 (Jan.) 1951

LITERATURE AND SAMPLES TO PHYSICIANS ON REQUEST

Kinney®

KINNEY & COMPANY, *Prescription Products,* COLUMBUS, INDIANA

Surgery

Blood Vessel Graft

Difficulty of sterilization has greatly limited the supply of grafts available for vascular repair. If segments of artery are protected by freezing, then irradiated with a safe dosage, bacteria are killed yet tissues remain viable. Human aorta obtained post mortem was sterilized and transplanted successfully in 2 cases of aortic coarctation, so that blood pressure remained normal during four and six months of observation. Of 60 unsterile or intentionally contaminated grafts irradiated and inserted in abdominal aortas of dogs, only 2 became infected, report Drs. Irving A. Meeker, Jr., and Robert E. Gross of Harvard University, Boston, who used high-voltage cathode rays from a specially designed electrostatic generator. Vascular material was first placed in a dry ice trough at a temperature of −50° C.

Science 114:283-285, 1951.

Education

Poliomyelitis Fellowships

Fellowships in poliomyelitis training lasting one to five years, with annual stipends from $3,600 to $7,000, are available to physicians. Further information may be obtained from the Division of Professional Education, National Foundation for Infantile Paralysis, 120 Broadway, New York 5, N.Y.

Basic Science Briefs

Virology

Poliomyelitis Inhibition

The virus of poliomyelitis cannot multiply without the amino acid tryptophan, an element essential to human nutrition. If a dietary substitute, 6-methyl tryptophan, is fed, the material is partly utilized for growth and also inactivates the virus in infected mice. Dr. A. F. Rasmussen and associates of the University of Wisconsin, Madison, find that when enough tryptophan to prevent actual deficiency is then added to the animal's food, infection is modified, and the mice become immune to poliomyelitis.

Circulation

Hematologic Role of Lung

The pulmonary circulation is apparently a reservoir that delivers leukocytes and platelets into the peripheral blood stream immediately after stimulation. The lungs may also account for some types of cellular deficiency not fully explained by other factors, especially thrombopenia, comment Dr. H. R. Bierman and associates of the National Institutes of Health, Bethesda, Md., and the University of California, San Francisco. The mechanism of leukocytosis and thrombocytosis following an intravenous dose of epinephrine was investigated. From 0.1 to 0.2 mg. was given to several patients with metastatic malignant disease, and blood was withdrawn by catheters in the right ventricle and a large artery. Leukocyte and platelet counts rose higher in arterial than in venous blood, and more rapidly by at least 1 or 2 circulation times. The increase was greater and lasted longer in platelets than in white cells.

Science 114:276-277, 1951.

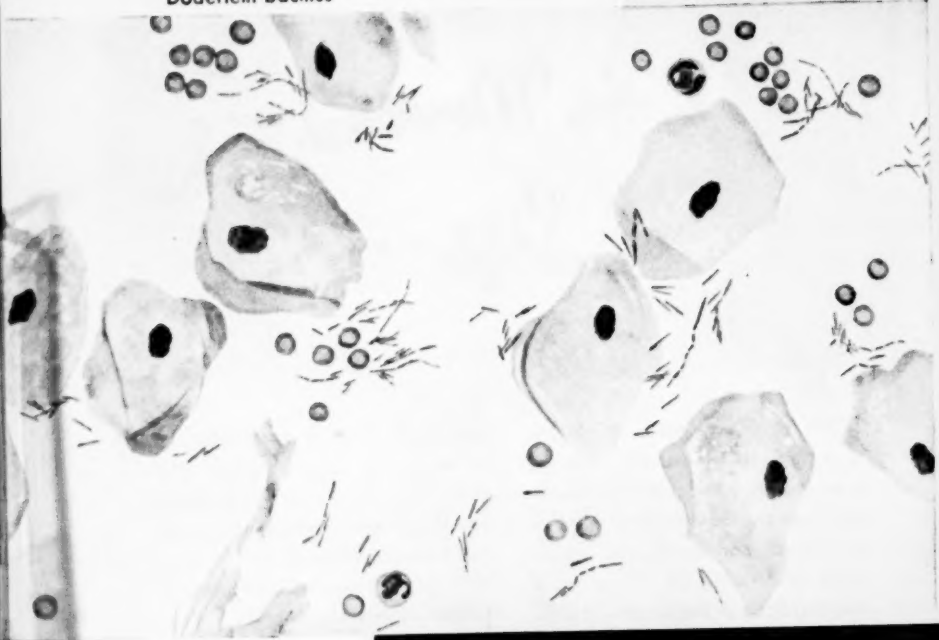
Angiology

Hypertensive Hormone from Brain

With appropriate stimulation, the brain apparently acts as an endocrine organ and releases a vasopressor into the blood. The hormone may be a factor in widely differing types of hypertension. Dr. Robert D. Taylor and associates of the Cleveland Clinic, Cleveland, confirmed liberation of the substance by cross circulation of blood in dogs. Spinal cords were pithed below the sixth cervical segment and both vagi were cut in the neck. A sinusoidal current was applied to the central ends in one dog, resulting in a slow rise in arterial pressure in the other dog. Centripetal stimulation of the cut sciatic nerve after medical sympatholysis had similar effects. The new hormone differed from epinephrine, norepinephrine, renin, angiotonin, and pitressin. Activity was increased by large doses of tetraethylammonium chloride and abolished by *l*-hydrazinophthalazine.

Arch. Int. Med. 88:1-8, 1951.

Döderlein bacillus



Trichomonas vaginalis

"The treatment of trichomonas vaginalis vaginitis . . . has pretty well been narrowed down . . . to two fundamental components. . . .

"One is the acidification of the vagina, the maintenance of the normal acid pH of the vagina . . . and,

"secondly the use of a parasiticidal agent to assist in the eradication of the offending organisms."

—*Hardy, J. A.: Office Gynecology, J. Missouri M. A. 45:811 (Nov.) 1948.*

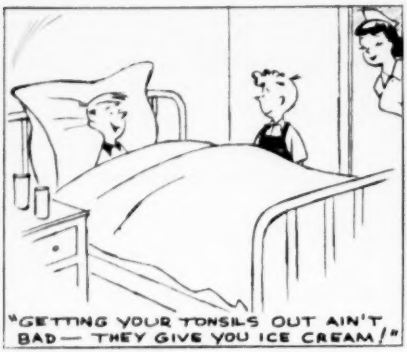
FLORAQUIN®

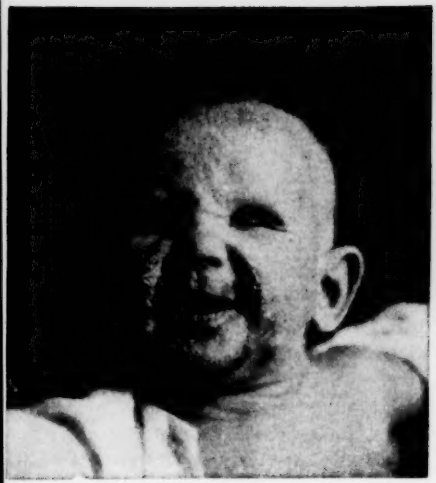
. . . fulfils both these vital essentials. Floraquin contains the effective trichomonacide Diodoquin® together with lactose, boric acid and specially prepared anhydrous dextrose to reestablish and maintain a normal vaginal pH unfavorable to pathogenic flora.

SEARLE RESEARCH IN THE SERVICE OF MEDICINE

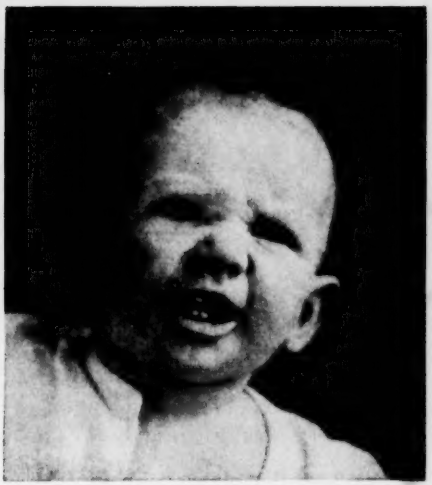
Nellie Nifty R.N.

by kaz





• *Photo shows infantile eczema after 4 months duration. Almost the entire body was affected.*



• *Photo of same infant 13 days after inclusion of Mazon in the treatment regimen.*

MAZON *for Infantile Eczema*

● A substantial therapy for a capricious condition

While prognosis in infantile eczema varies in individual cases and the impossibility of recurrence cannot be guaranteed, considerable relief from symptoms can in most instances be promised within a reasonable time.

Infantile eczematoid lesions not caused by or associated with systemic or metabolic disease are usually amenable to treatment with Mazon, a highly acceptable combination of mercury salicylate, sodium stearate, benzoic acid, salicylic acid and tars in a non-greasy, non-staining base.

BELMONT LABORATORIES, Philadelphia, Penn.

MAZON

Washington Letter

Congressional Accomplishments in Health Legislation

Congress in the session just ended compiled an imposing list of accomplishments in the health fields.

Nothing, of course, was done to set up a national compulsory health insurance program or to stimulate voluntary health insurance. These questions will have to wait a clearing of the political waters. They are so controversial that they were hardly discussed anywhere on Capitol Hill during the first session of the Eighty-second Congress.

But real progress was made, and the country will benefit long after the national emergency is ended.

• An emergency housing bill was enacted, providing for community facilities in addition to housing. Hospitals and health clinics are recognized as essential community facilities. The purpose of the provision is to insure that no defense boom area will go without necessary health, recreational, and educational facilities.

Before hospitals may share in these federal funds, they must present evidence that a real need exists and that the local community cannot or will not provide the hospitals without federal help. Furthermore, the community must be designated as a "critical area" by the president, and an attempt must first be made to obtain grants under the Hill-Burton law.

Once these conditions are met, the sky is the limit on what FSA may do through Public Health Service to provide adequate health facilities. It may make loans or combined loans and grants and may even operate the hospital or clinic if the local community is not able or willing. Once the emergency has passed, FSA would be required to turn the facility over to the community.

Complicated as the law sounds, it does assure that no defense boom town will be without proper health personnel and equipment very long.

A total of $4,000,000 was appropriated for other community facil-

(Continued on page 154)

"Emergency? Ask her if it's anything serious."

Differing from the ordinary ground-glass hypodermic syringe, the barrel of the new B-D DYNAFIT® SYRINGE is molded to fit its plunger, *not ground.* This means:

1. LESS FRICTION between plunger and barrel.

2. LESS EROSION because the intact "skin" of the glass barrel protects it during cleansing and sterilizing.

3. LESS BREAKAGE because the glass has not been weakened by grinding.

Less friction, less erosion, and less breakage mean longer life . . . and lower cost-in-use.

You'll notice the difference the first time you use a B-D DYNAFIT SYRINGE. The finely-ground plunger slides smoothly along the unground inner surface of the barrel. And it will continue to do so because the DYNAFIT virtually never wears out.

See the new B-D DYNAFIT SYRINGE at your dealer's. Available in 2 cc., 5 cc., and 10 cc. sizes with Luer-Lok® tip.

BECTON, DICKINSON AND COMPANY, RUTHERFORD, N. J.


Schering ANNOUNCES

NEW

DORMISON*

new, non-barbiturate hypnotic

for safe, sound sleep
without drug hangover
free from habit-forming
properties of the barbiturates

safe
free from habit-forming or addiction properties of barbiturates; rapidly metabolized; no cumulative action; no toxic effects on prolonged use

acts gently and quickly in insomnia
mild hypnotic action quickly induces restful sleep

no prolonged suppressive effect
action subsides after a few hours; patient continues to sleep naturally

no drug hangover
patient awakens refreshed with no "drugged" feeling

DORMISON is a substance new to pharmacology, completely different from barbiturates and other hypnotics. It contains only carbon, hydrogen and oxygen. It has no nitrogen, bromine, urea residues, sulfone groups or chemical configurations present in depressant drugs now in use.

The usual dose of DORMISON (methylparafynol†) is one or two capsules, taken just before the patient is ready for sleep. DORMISON's wide margin of safety allows liberal adjustment of dosage until the desired effect is obtained. DORMISON is supplied as 250 mg. soft gelatin capsules in bottles of 100.

*hering CORPORATION • BLOOMFIELD, N. J.

*T.M. †U.S. Pat. Pending

DORMISON

ities under this bill, but nothing specifically earmarked for hospitals. Congress felt that the hospital situation wasn't acute enough at the time to warrant an appropriation. After the first of the year, Federal Security Agency officials will be invited to outline the need for emergency hospital construction, and a separate appropriation may be voted.

• Laws were enacted setting up a Federal Civil Defense Administration which had started its work under executive department orders before the session met last January. Purchase by the government of medical supplies for regional stockpiling was given top priority in CDA appropriations. Funds already have been allocated to a dozen or more states, which must match the grants. Actual procurement is being handled, however, by GDA.

Here again, congressional critics thought the appropriations were too small. The congressional committees, however, made it clear that the money voted was all that could be used advantageously in the next few months. And, as in the case with FSA and the hospitals, CDA officials were invited to come back to Congress after the first of the year and explain how much money they needed and how it would be used.

CDA was given $56,000,000 for procurement, any or all of which may be used for medical supplies.

• Rep. James J. Delaney (D., N.Y.), as chairman of the Special Committee on Chemicals in Foods, pressed the investigation to determine what preservatives, coloring agents, insecticides, and other chemicals were doing to the health of the people.

This committee published one comprehensive report and was authorized to continue its study. It is too early to say whether new laws will result, but at least all expert opinion on the subject will be collected for the first time. Next year the committee will look into the possible dangers in cosmetics.

• As part of the tax bill, Congress agreed that persons over 65 years of age could deduct virtually all medical expenses before calculating income taxes. Admittedly not much money will be lost to the government, but this may be opening the door to broader tax relief, possibly extension of the same privilege to all income-tax payers in the future.

• A Universal Military Training law was enacted, with provision for medical care of all trainees. Also, a presidential commission is prepared to recommend that Congress limit medical care of trainees, after active duty, to treatment of illnesses and injuries incurred while in service. Again, this is not too important in itself, but may point the way toward limitation of the VA program, which hospitalizes 2 non-service cases for every service-connected case.

• Appropriation of $82,500,000 for the Hill-Burton hospital construction grants, although not an extravagant sum, will allow the program to continue on almost the scale maintained for the previous year.

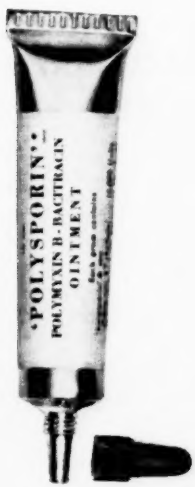
A new federal code covering prescriptions became law. It legalizes telephone prescriptions, gives statutory definition to "prescription only" drugs, and lays down new specific controls for drug labeling.

(Continued on page 158)

Management of pyogenic skin disorders . . .

'POLYSPORIN'® brand

POLYMYXIN B–BACITRACIN OINTMENT



Tubes of 15 Gm. (with blunt nozzle) ⅛ oz. (with ophthalmic nozzle)

bactericidal to BOTH *gram-positive and gram-negative organisms, no local tissue damage, little likelihood of sensitization.*

For eliminating a very wide range of local infections.

For preventing contamination of burns, wounds, and skin grafts; such protection shortens healing time and reduces incidence of fever and local inflammation.[1]

1. Jackson, P. M., Lowbury, E. J. L., and Topley, E.: Lancet, 261:137, 1951.

Each gram of 'POLYSPORIN' OINTMENT contains:

'AEROSPORIN'® brand Polymyxin B (Sulfate) 10,000 Units
(Equivalent to 1 mg. Polymyxin Standard)
BACITRACIN 500 Units

Complete information will be sent on request

BURROUGHS WELLCOME & CO. (U.S.A.) INC., *Tuckahoe 7, N. Y.*

Doctor to Doctor

Think of a gag that fits the illustration. For every issue a new gag is published and the author is sent $5. The Dec. 1 winner is

J. A. White, Jr., M.D.
Alexandria, La.

Mail your caption to
The Cartoon Editor
Caption Contest
No. 2
MODERN MEDICINE
84 South 10th St.
Minneapolis 3, Minn.

"Poor Joe. He survived the 'cervical fecaloma' he developed during his school days but now he has 'coccygeal plumbism.'"

PROTAMIDE.. *Again Confirmed*

IN CLINICAL TESTS AT BETHESDA NAVAL HOSPITAL *for* HERPES ZOSTER

William C. Marsh, Commander (MC) U.S.N. in a currently published paper,[1] "Treatment of Herpes Zoster With Protamide," which is now available to physicians as a reprint, presents these findings:

An ampul of Protamide was administered intramuscularly daily to thirty-one cases of herpes zoster.

Of the thirty-one cases—twenty-six were relieved of pain in twenty-four hours to four days. Four cases required longer treatment for complete relief. In only one case was pain relief incomplete. (This case may have presented post-herpetic neuralgia, as pain was present for five weeks before treatment. More prolonged therapy is indicated in such cases.)

"The relief of pain was superior to that obtained when using either pituitrin, thiamine chloride, autohemotherapy, sodium iodide or high voltage roentgen therapy. Further, vesicles and crusts disappear much more rapidly than in untreated cases.

"The advantages of Protamide are the simplicity and absence of pain in administration, lack of reactions, and its apparent safety."

Additional clinical data on the dramatic results obtained with Protamide in the treatment of Herpes Zoster and the relief of the lightning pains and ataxia of Tabes Dorsalis will be furnished physician on request.

[1] *U.S. Armed Forces Med. Journal, September, 1950*

SHERMAN LABORATORIES
G. H. Sherman, M. D., Founder
BIOLOGICALS • PHARMACEUTICALS
DETROIT 15, MICHIGAN

• A long, detailed investigation of VA's medical program by a Senate subcommittee under Sen. Hubert Humphrey (D., Minn.) was prompted by the ouster of Chief Medical Director Dr. Paul Magnuson by VA head Carl R. Gray, Jr. The report was sharply critical of Gen. Gray. The Committee called on VA to issue certain new regulations to strengthen the authority of the medical director and asked Congress to pass new laws with the same objective.

Many observers feel that while the report may not be acted upon, it is the first real postwar investigation of VA and provides a standard of conduct against which future administration of the agency may be checked. At the least, it will be a standing warning to VA.

A number of other medical bills received various degrees of attention from Congress. Most significant were the proposals for federal assistance to medical, dental, and nursing schools. In the Senate, one bill reached the floor but was withdrawn after an adverse vote on an amendment. Undoubtedly it will be called up in the next session.

Some progress was made on a move to authorize a federal nationwide survey of sickness. Surg. Gen. Scheele approved the idea, but suggested that first a method be worked out for making the survey. This study probably will be authorized after start of the second session.

THE ONLY ONE IN ORAL DROPS

only Terramycin *in liquid concentrate for optimal convenience*

Crystalline Terramycin Hydrochloride Oral Drops provide 50 mg. in each 9 drops—or 200 mg. per cc.—a concentration affording optimal simplicity and convenience in dosage.

Can be taken "as is" or mixed with food and fluids

These potent drops for oral administration are completely miscible with most foods, milk and fruit juices, thus permitting a further simplification in the therapeutic regimen.

Pure crystalline antibiotic—well tolerated

Terramycin Oral Drops are prepared from pure crystalline material. As with other dosage forms of this effective broad-spectrum antibiotic, Terramycin Oral Drops are well tolerated.

Supplied: 2.0 Gm. with 10 cc. of diluent, and specially calibrated dropper.

ANTIBIOTIC DIVISION *Pfizer* CHAS. PFIZER & CO., INC., *Brooklyn 6, N. Y.*

Early in the session, the Senate passed a bill to provide for federal financial assistance in establishing and maintaining local public health departments. In the House, the bill became entangled in committee and was not reported out. However, the bill has an excellent chance of becoming law next year.

Most controversial subjects were proposals for an emergency maternity and infant care program and for government hospital insurance for social security recipients.

U. S. Children's Bureau is interested in reestablishment of an EMIC plan along the lines of the one in operation in World War II and has some support on Capitol Hill and in some national welfare groups. However, no hearings were held, and the whole question is carried over to the next session. Long and bitter arguments are likely, not over the objective, but over details.

Another heated issue is FSA Administrator Ewing's proposal for hospitalization at 65. Mr. Ewing made the suggestion early in the summer, but introduction of legislation was delayed.

double *the power to resist food* in obesity!

Long-established habits of catering to an enormous appetite and the "love for eating" make the problem of weight reduction doubly difficult. It requires a strong will-power to adhere to a restricted dietary regimen day after day . . . for dietary restriction and lack of bulk create a gnawing sense of emptiness that impels violation of the diet. Bulk hunger, as well as excessive appetite, therefore, must be controlled.

Based upon the modern concept of hunger and appetite, Obocell makes reducing easy. Obocell is a new therapeutic adjunct that curbs appetite, suppresses bulk hunger, elevates the mood and **doubles** the power to resist food.

Each Obocell tablet contains Dextro-Amphetamine Phosphate, 5 mg.; Methylcellulose, 150 mg. **Dose:** Three to six tablets daily, usually given 30 minutes before meals. **Supplied:** Bottles of 100, 500, 1000.

Literature and Samples on Request

IRWIN, NEISLER & COMPANY • Dept. MM • **DECATUR, ILLINOIS**

Research to Serve Your Practice

Obocell®

A COMBINED HUNGER AND APPETITE DEPRESSANT

Our Office Nurse

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H. E. Calvert, M.D.
San Antonio, Tex.

Mail your caption to
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No. 3
MODERN MEDICINE
84 South 10th St.
Minneapolis 3, Minn.

"What I said was 'leave catheter indwelling,' not 'catheter in the dwelling.'"

what do you look for in an x-ray machine?

is it **value** ?

Rightly, you regard the purchase of an x-ray machine as a *long-term investment.* You'll get year after year of faithful service from a Picker machine; it's honestly built of fine materials by painstaking craftsmen, without skimp or compromise.

is it **ease** of operation?

The automatic monitor control principle was pioneered by Picker; we have led the industry ever since in reducing the complexity and increasing the certainty of x-ray operation. Picker machines are noted for the smooth, quiet way they run . . . for the ease with which they "handle."

is it a **name** you can trust?

Building fine apparatus is a habit of over half a century's standing with Picker. Wherever quality counts . . . in hospital x-ray departments, in the offices of distinguished radiologists the world over, you will find Picker equipment highly regarded. And your investment will always be safeguarded by an alert service organization which has won an enviable reputation for devotion to the customer's interest.

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all you expect . . . and more

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THE PHYSIOLOGY AND PATHOLOGY OF HEMOSTASIS *by* Armand J. Quick. 188 pp., ill. Lea & Febiger, Philadelphia. $4

PERSONALITY STRUCTURE IN A COMMON FORM OF COLITIS *by* Georgene H. Seward *et al.* 26 pp. American Psychological Association, Washington, D.C. $1

BRONCHUS ET PULMO IN IHREN KLINISCHEN BEZIEHUNGEN *edited by* A. Werner-Hässig. 176 pp. S. Karger, Basel, Switzerland. 19 Sw. fr.

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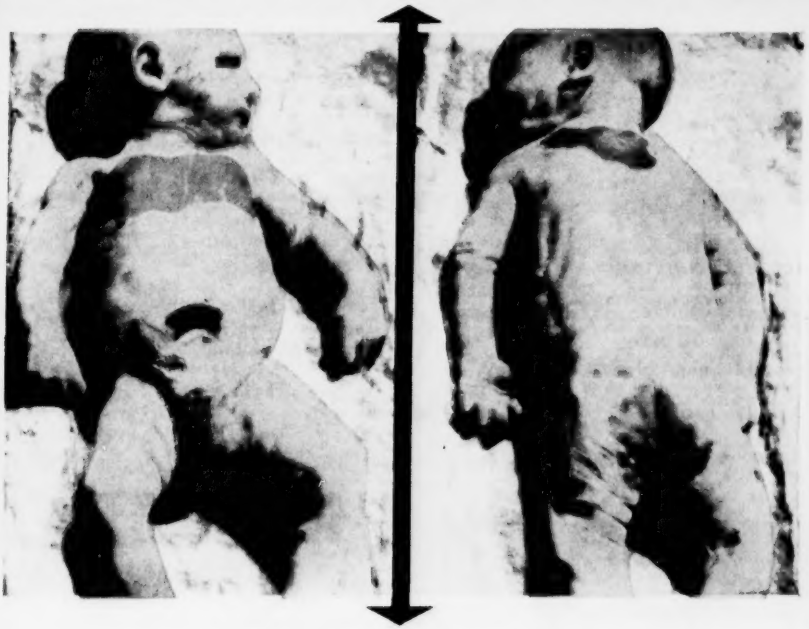

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First, oranges vary widely in ascorbic acid content.[2] Thus, whole oranges squeezed a few at a time provide a highly erratic source of Vitamin C. Each can of Minute Maid, however, represents the pooling of juice from hundreds of thousands of oranges; thus wide variations in nutrients tend to be eliminated.

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In view of the above findings, more and more physicians now specify Minute Maid Fresh-Frozen Orange Juice in lieu of home-squeezed orange juice.

REFERENCES

(1) *Rakieten, M. L., et al., Journal of the American Dietetic Association, October, 1951.*

(2) *U. S. Department of Agriculture Technical Bulletin No. 753, December, 1940.*

(3) *Roy, W. R., and Russell, H. E., Food Industries, Vol. 20, pp. 1764-1765 (1948).*

(4) *Joslin, C. L., and Bradley, J. E., Journal of Pediatrics, Vol. 39, No. 3, pp. 325-329 (1951).*

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1. Warkany, J.: Obst. & Gynec., Oct., '48, p. 693.
2. Burke, B. S.: Obst. & Gynec. Survey, Oct., '48, pp. 716-723.
3. Spies, T. D.: 1948 Year Book of Endocrinology, Met. and Nut., p. 393.

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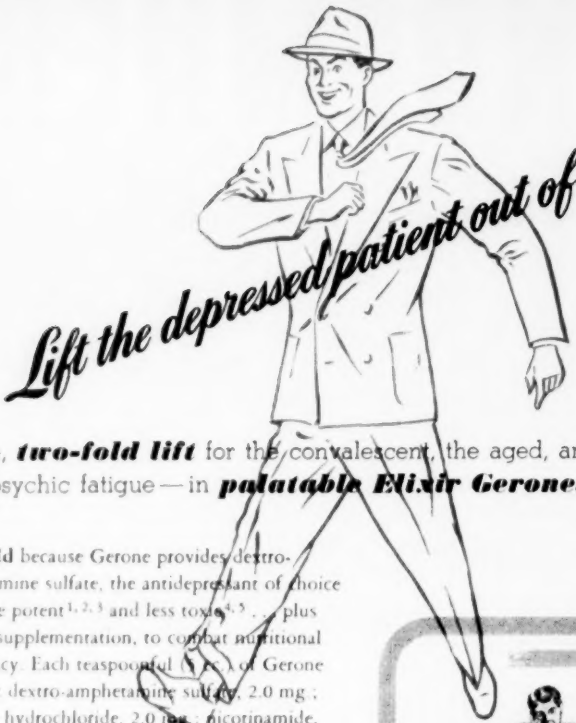

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1. Myersen, A. J. Nerv. and Ment. Dis. 103:598 (June) 1947.
2. Barnett, S. E.: Eye, Ear, Nose and Throat Monthly 29:19 (January) 1950.
3. Schulte, J. W., Reif, E. C., Bacher, J. A. Jr., Lawrence, W. S., and Tainter, M. D.: J. Pharmacol. and Exper. Therap. 72:62-74 (Jan.) 1941.
4. Loofbourow, D., and Palmer, R. S.: M. Clin. North America 33:1269 (September) 1949.
5. Gelvin, E. P. and McGavack, T. H.: New York State J. Med. 49:279 (Feb. 1) 1949.

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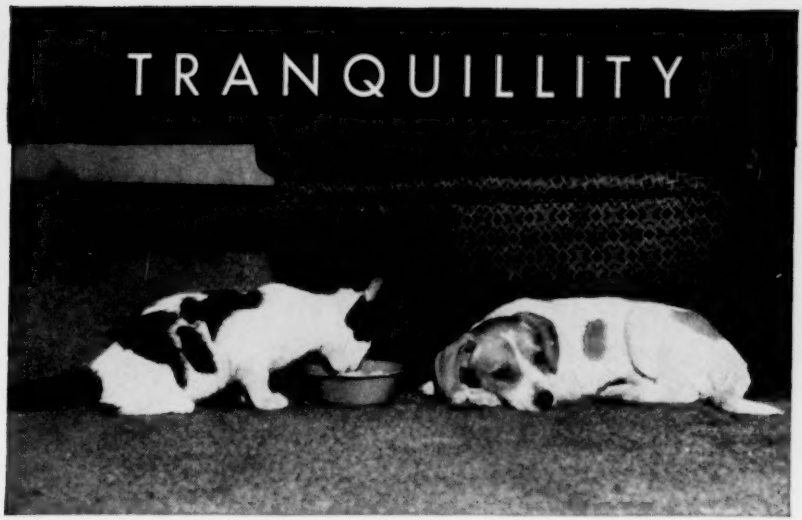

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